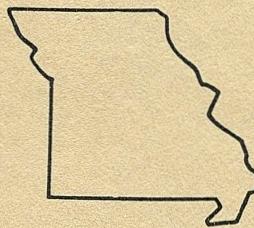


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# OCCUPATIONAL EMPLOYMENT DATA SOURCES

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University of Missouri - Columbia  
for the  
Division of Manpower Planning  
Department of Social Services  
State of Missouri

OCCUPATIONAL EMPLOYMENT DATA SOURCES FOR THE STATE OF  
MISSOURI AND SUBSTATE AREAS (with related information  
sources and suggestions for administrative uses.)

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and  
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February 1980

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SECTION ONE

INTRODUCTION, OVERVIEW AND  
USER GUIDE

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## INTRODUCTION

This publication provides an accurate description of occupational and other employment data sources that are available on a recurring basis for Missouri, and, in some cases, sub-state areas as well. Detailed information about coverage, frequency of revision, method of collection, and issuing agency is correct as of January 1980. (The major occupational employment data collection program is being refined in response to often stated requirements for improved data. Therefore, readers are urged to exercise caution in assuming stability in the content of this, or any other data source in future years.)

Also included in this inventory of available data sources are two types of related information series that will be of interest to many training program managers and planners. One such category includes selected sources of employment data that do not include occupational detail. The other category includes two sources of information about skill training program enrollments.

The guiding principle in developing this inventory has been to include only routinely available recurring sources that training program managers and planners can count on having at their disposal at predictable times and in consistent formats. No attempt has been made to list all of the ad hoc employment and job opening surveys that have been conducted for particular localities over the years.

The next few pages offer an overview of the data sources that are included, and develop suggested ways in which these and related information items can be combined to best user advantage. This section is not intended to serve as a comprehensive planning guide; attention is limited to an examination of sources and uses of occupational employment data.

#### OVERVIEW OF SOURCES

The most important source of occupational employment information that is currently available for the state is the Missouri Division of Employment Security's Occupational Employment Survey publication series. These publications offer the most accurate and current understanding of occupational staffing patterns in major sectors of the Missouri economy that has ever been available.

The Occupational Employment Survey publications should not be confused with the employment projection publications, also issued by the Missouri Division of Employment Security. These employment projections are prepared through a cooperative agreement involving the Bureau of Labor Statistics, and the Employment and Training Administration, both in the U. S. Department of Labor. At this time, the occupational composition of these employment projections is based on 1970 Census of Population occupational employment data. Soon, however, the Occupational Employment Survey data will be used to create a more current and area specific basis for distributing projected industry employment among its

\ component occupations.

Neither of these major sources of occupational employment information is available for most sub-state areas, other than limited coverage of selected major metropolitan centers (Standard Metropolitan Statistical Areas, or SMSAs). Readers should be aware that neither the occupational employment survey, nor employment projections data sources is intended to identify current job vacancies. However, both are useful as starting points for estimating the likely presence or absence of future job opportunities.

The only regularly available source of selected job vacancy information is the Job Bank Openings Summary (JBOS) released monthly by the U. S. Employment Service. This publication is useful as a general source of information about labor market activity, which is one important input for administrative action in choosing among training program options.

Brief reference is made in the inventory to two national publications issued by the Bureau of Labor Statistics: The Occupational Outlook Handbook and the Occupational Outlook Quarterly. Neither refers to Missouri-specific prospects, but both are useful as supplements to state sources for selected uses.

Information about employment prospects in an occupation is important, but it is not sufficient, by itself, for determining whether training should be offered at all; and if so, in what numbers. One important type of complementary

information is occupational wage rate data.

Three sources of wage rate data are described in this inventory: Bureau of Labor Statistics Area Wage Survey data collected annually for major metropolitan areas; annual wage surveys for Job Service administrative areas in the state, produced by the Missouri Division of Employment Security; and, surveys conducted annually in the Joplin area, and bi-annually in the St. Joseph area by the local office of the Missouri Division of Employment Security. The limitations of these surveys are described in the inventory, but it should be remembered that these are the only routinely available wage rate data currently collected.

None of the other data sources that are included in this inventory provide occupational detail. However, several of them offer important area- and industry-specific employment information, which can be used in conjunction with the occupational sources to obtain a reasonable understanding of local labor market conditions.

County Business Patterns industry employment data is collected annually by the U. S. Department of Commerce directly from employers, and is published by county with disclosure restrictions determining what level of industry detail is offered.

Current Employment Statistics data on employment, new hires and terminations are collected monthly, again directly from cooperating employers, in a program involving the Missouri Division of Employment Security, and the Bureau of

Labor Statistics and Employment and Training Administration of the U. S. Department of Labor. These data appear in several publications: the Bureau of Labor Statistics' monthly Employment and Earnings, and the Missouri Division of Employment Security's monthly Missouri Area Labor Trends.

The U. S. Department of Agriculture publishes a quarterly Farm Labor Report that is based on a national sample survey of operating farms. Coverage of the agricultural sector at the state and substate levels remains one of the weakest links in the occupational employment information chain.

The U. S. Bureau of the Census conducts surveys of selected industry sectors (e.g., manufacturing, selected services, mineral industries, and wholesale and retail trade) every five years, in cooperation with various other government agencies. These Economic Censuses are released with a three-year delay from the time of survey. Employment data are published for the state, SMSA's, and some counties and municipalities depending upon applicable disclosure rules.

A sample page from each of the data sources cited up to this point is included with the respective descriptive narrative.

The remaining sources of employment information described in the inventory offer less comprehensive coverage of major industries or geographic areas. The Missouri Division of Employment Security prepares a few Annual

Planning Reports for selected SMSA's, describing varied aspects of the area labor force. These are based upon 1970 Census of Population data accompanied by more recent information when it is available. Current Population Survey data are collected monthly by the Bureau of the Census for a sample of households that is designed to be representative for the nation and selected SMSA's. This source is not of general use for sub-state program planning purposes, although the general trends of economic conditions revealed should be monitored.

The 1980 Census of Population will provide a wide array of useful occupational employment information when the data become generally available in late 1981. Until then, 1970 Census data may provide a valuable foundation upon which to fashion a more current representation of labor market conditions in a designated area.

Finally, two examples of highly specialized labor force data are provided: Manpower Information for Affirmative Action Programs, which formats available labor force data for this particular use; and, Missouri Health Manpower publications, which cover a range of allied health professions.

All of the data sources referred to up to this point involve employment, which is the outcome of historical relationships between the demand for and supply of specific labor services. The final two data sources included in the inventory cover enrollments in, and completions of public vocational education and higher education programs in the

state.

The Vocational Education Data System (VEDS) is a nationally mandated way to collect annual information about enrollments in and completions from federally reimbursed vocational programs. The enrollment data are available by individual school, district, and curricular program area (U. S. Office of Education codes). The completion data cover a sample of program leavers. This data source is still in development stages, so readers who think they may be able to use it to advantage should contact the designated agency to determine whether any changes have been introduced.

The Higher Education General Information Surveys (HEGIS) include institution-specific data on enrollments and graduates. This source is also in developmental stages. At this time, relatively little curricular detail is provided.

At this time, there are no readily available comprehensive sources of data estimating flows through private proprietary skill training institutions, classroom and on-the-job training programs funded by the Comprehensive Employment and Training Act, or formal registered apprenticeships (the regional office of the Bureau of Apprenticeship Training collects such data, but there is no procedure to make it generally available to state and local data users).

Accompanying this inventory of available data sources are three presentations that are intended to assist readers in their use of these data: A glossary of terms, a list of acronyms, and a brief exploration of the classification

systems that are used to organize the data collected.

It is unrealistic to expect infrequent users of occupational employment data to be sensitive to the differences among the classification systems that appear: The Dictionary of Occupational Titles (DOT), Census, Standard Occupational Classification (SOC), and Occupational Employment Survey (OES) classification systems for employment data; the U. S. Office of Education (USOE) and Higher Education General Information Surveys (HEGIS) classifications for current enrollments and completions; and the Standard Industrial Classification (SIC) system for industry categorization. Procedures have been developed for moving back and forth among these different coding systems, but these do not completely remove the user's responsibility to be aware of the consequences of moving among the classifications.

This completes the overview of what will be found in the inventory section of this publication. What follows next is a suggested approach to using these data sources for management and planning purposes.

#### MANAGEMENT AND PLANNING USES OF OCCUPATIONAL EMPLOYMENT DATA

The following requirements are among those most frequently expressed by users of occupational employment information:

- We need guidance in how to use the data that are available.
- Data should be more readily accessible.

- There should be greater comparability among available data sources.
- There is a need for more local data that conforms to mandated reporting boundaries.
- Users should be given a basis upon which to determine whether a particular data source is reliable "enough" for use.

This publication addresses the accessibility need, and this section provides an introduction to uses of the data sources presented. Development of procedures to increase comparability among data sources is now underway at the national level. Efforts are also underway to meet mandates for localized data. The process of establishing confidence between data producers and users will require time and commitment by both parties to understand the other's circumstances.

#### Breadth of Inquiry

The starting point for examining occupational employment information for management or planning purposes is to decide what the range of investigation will be. Are existing institutional facilities, staff levels and expertise, and equipment inventory to be taken as given, or are one or more of these factors variable? Answering this question helps define the boundaries of the range of occupations that must be examined.

Awareness of the normal access program completors have had to job opportunities also contributes to this initial

analytical step. Care must be exercised here though; if consideration is being given to opening programs to new types of enrollees (e.g., women or minorities) for the first time, historical placement experience may not provide reliable guidance for future prospects.

Obviously, the range of occupations to be explored is also dependent, in part, upon the administrative responsibilities exercised by the investigator: The supervisor of, say, vocational agriculture programs has narrower occupational employment data concerns than the district superintendent, the local CETA prime sponsor director, or the Regional Manpower Advisory Committee staff person.

#### Employment Versus Job Openings

Confusion surrounds the choice of appropriate occupational data to guide management and planning decisions. A recent planning manual, for example, required documentation that unfilled job vacancies exist, so the participants in a proposed training program may have a reasonable expectation of employment after completing training. For many reasons this may be exactly the wrong indicator of penetration potential to require. Why are openings unfilled? What forces might change this situation before program graduates become available? How stable would the apparent unmet need be? What other sources of training might also be responding to the same awareness of need? These questions illustrate the complexity of the matter.

The following statements cover the most important

aspects of this issue:

- The only routinely available source of information about current job vacancies is the Missouri Job Service, and their occupational coverage is limited and varies by area of the state.
- Projections of job openings only reflect anticipated growth and replacement needs due to withdrawal from the labor force. Exits from jobs by individuals who remain in the labor force, which is overwhelmingly important in many sections of the economy, are not reflected in these projections.
- Projections are based on historical experience, so newly emerging occupations are unlikely to be represented.

Generally, too much emphasis has been placed on awareness of actual job vacancies. Job opportunities routinely appear in virtually all employment sectors. The trick is to determine which of these opportunities might realistically be available to graduates of a current or proposed training program. Large employment sectors might be expected to offer a higher probability of opportunity than small ones, but this won't always be the case; it depends on factors such as employment turnover, other sources of qualified employees, wage rates and working conditions, and employer or coworker attitudes. A rapid growth rate may offer

little quantitative prospect if the current employment base is small; and a sluggish major sector might therefore be more attractive as a source of potential opportunity. Remember, many hirings and promotions occur every day in declining industries!

Combining Data Sources to Improve Awareness of Likely Opportunities

Consider the following sequence of data uses:

- Within the range of occupations previously decided upon, determine which ones appear most promising in the Missouri Division of Employment Security's employment projections publication most appropriate for your local area.
- Look up this occupation, or these occupations in the Missouri Division of Employment Security's Occupational Employment Survey publications to determine which industries employ relatively large numbers of persons in these occupations.
- Review the wage survey data that are available to determine whether useful information of this type exists for the occupations of interest. Don't put undue emphasis on local specificity. Yes, wage rates differ among localities; but relative wages among occupations don't differ very much in this regard.

You can also ask local Job Service personnel, and area employers, for help at this stage. The point here is to decide whether potential enrollees would find this an attractive job opportunity.

- Once you have identified the major industries that utilize the occupation(s) of interest, examine the relevant County Business Patterns and Economic Census publications to determine how many establishments of what sizes exist in your local area.
- If the occupation(s) still appear promising as a potential source of opportunity for trainees in your area, identify a few specific firms in the industries and contact their personnel representatives to discuss prospects in these occupations.
- Among the things you would want to know from individual employers are such things as minimum education credentials required, whether other applicant attributes can substitute for prior training, traditional sources of new employees, recent turnover experience, promotional opportunities, and starting wage rates.

All of these steps can be taken without any knowledge about specific job vacancies. The most important point is

to get a sense of the openness of employers to prospective graduates of your program.

The following principles hold in most cases:

- The newly emerging high technology occupational areas are likely to be attractive to a wide range of training institutions.

Wages and working conditions are also likely to be particularly attractive in these sectors. The point? What makes these possibilities attractive to you assures lots of competition for the opportunities that do exist.

- Women and racial minorities still face barriers in many sectors of our economy.

Some of these barriers exist beyond the initial hiring point. Make an effort to determine whether sex or race appear to influence employment retention and promotion. If so, consider how this will influence your administrative decisions. You may be in a position to break down the "no qualified applicant's" excuse for unequal opportunity in the past.

#### Conclusion

These are just a few of the simple steps anyone can take with the data that are available to identify potential

training opportunities. Since far more administrative decisions involve changes in enrollment level than introduction or termination of an entire program, fine tuning is required. These data are a small part of the total array of information that is required to fine tune administrative decisions. Among the important issues that are not examined here are:

- Actual and desired mobility patterns of potential enrollees, which should influence the selection of the appropriate labor market to investigate.
- The appropriate degree of specific training that should be offered to accommodate local employers.
- The institutional relationships among potentially competing sources of skill development.
- The proper roles for subsidized on-the-job training and formal apprenticeships.

In other words, this publication takes one step along the path to effective planning and management of human resource development. Many other steps remain to be taken.

SECTION TWO

OCCUPATIONAL EMPLOYMENT

DATA SOURCES

RESOURCE: Occupational Employment Statistics (OES) Program

FORMAT OR DELIVERY MEDIUM: Data is used in conjunction with other series; data for Missouri is used in the publications of Occupational Staffing Patterns and Employment Outlook: Projections to 1985.

GEOGRAPHIC COVERAGE: Missouri and SMSAs

RELEASE SCHEDULE: The data for Occupational Staffing Patterns is collected from various industries on a three year cycle, with reports for the industries currently surveyed published each year. The Employment Outlook: Projections to 1985 series is updated as necessary.

PRODUCING AGENCY: Bureau of Labor Statistics, Employment and Training Administration, and the State Divisions of Employment Security.

AVAILABILITY: Contact Missouri Division of Employment Security, 421 E. Dunklin, P.O. Box 59, Jefferson City, MO 65101. (314) 751-3215.

DATA ITEM: Current and projected nonagricultural occupational employment by industry.

DESCRIPTION: The Occupational Employment Statistics Program, (OES), is a cooperative effort between the Bureau of Labor Statistics, the Employment and Training Administration, and the Missouri Division of Employment Security. It is designed for the collection, analysis, and dissemination of data on occupational employment by industry for national, state, and substate areas. The three basic elements of the program are: an occupational employment survey, an Industry/Occupation (I/O) matrix system, and the state and area employment projections. The survey looks at current staffing patterns, the matrix presents occupations as a percentage of employment in an industry which allows projections to be developed by occupation depending upon the relative growth of industries.

The Bureau of Labor Statistics is responsible for the technical development of the program and technical assistance to the states. The Missouri Division of Employment Security collects, analyzes, and disseminates the data. The Employment and Training Administration is responsible for funding and administering the program.

Occupational Employment Survey: The OES program provides estimates of industry staffing patterns through periodic surveys of nonagricultural wage and salary sectors of the economy. These surveys are conducted over a three year cycle with manufacturing industries covered one year; nonmanufacturing excluding trade, government, hospitals and schools the next year; and the balance of nonmanufacturing except hospitals the third year. Sample members come from lists of establishments reporting under state Unemployment Insurance laws. All firms with 100 or more employees are included in the survey, firms with fewer employees are sampled. Occupational definitions used in the survey come primarily from DOT, but they are not synonymous with the Dictionary of Occupational Titles classification system. Areas presently covered are the state, with the Kansas City SMSA included in the 1978 and 1979 nonmanufacturing surveys.

Industry/Occupation Matrix System: Matrices for Missouri are developed from survey data and present for a specific point in time employment in occupational categories, cross-classified by industry. The matrices thus show the

percentage of each type of occupation in each industry. A matrix for the Kansas City SMSA will be developed from an area survey starting with the 1978 nonmanufacturing survey data.

State and Area Occupational Projections: The projections are developed from a industry/occupational matrix, based on 1970 Census data and the BLS-790 survey data, and take into consideration: the past employment trends of industries; death and retirement rates of workers by occupation developed from the table of working life; and knowledge of economic conditions such as plant closings and openings, and technological innovations. Adjustments are also made for self-employed, unpaid family workers, and Government employment by function. These projections are intended to provide estimates of the magnitude of change in occupational employment, not precise measurement of future occupational employment levels. No attempt is made to adjust the projections for short-term cyclical movements in the economy.

Missouri has two types of publications developed from the OES program: Occupational Staffing Patterns, and an employment projection series.

Occupational Staffing Patterns: The purpose of these publications is to present employment by occupation within industries in order to identify trends in occupations to guide future training needs at the state level. Data is published by industry group according to the 1972 edition

of the Standard Industrial Classification Manual at the 3 digit level of detail when possible. For each industry the staffing patterns provide estimates of employment by occupation, percentage distribution of employment, and relative error. The data are published about one year after the survey period. The latest staffing pattern publications for Missouri are:

	<u>Published</u>	<u>Time Period Covered</u>
Nonmanufacturing	Sept. 1976	April, May, June 1975
Local Government	March 1977	Sept. 1975
State Government	Sept. 1976	Sept. 1975
Federal Government	Sept. 1976	Sept. 1975
Trade	April 1977	June 1976
Selected Regulated Industries	Oct. 1977	June 1976
Manufacturing	July 1978	April, May, June 1977
Selected Nonmanufacturing	Oct. 1979	April, May, June 1978

Employment Outlook: Projections to 1985: These projections are developed primarily from Current Employment Statistics data and ES-202 reports and are based on a historical series through the calendar year 1974. Employment estimates are provided by industry and occupation for 1974, projecting employment for 1985, annual growth, and separation rates. The data are published in a format based on the 1967 edition of the Standard Industrial Classification Manual at the 3 digit level of detail when possible and

occupational titles based on the 1970 Census. This information may assist planners in developing short-range training plans. Reports are available for Missouri, St. Louis SMSA, Kansas City SMSA, St. Joseph SMSA, and Springfield SMSA.<sup>1</sup>

Projections are not available for all sub-state areas due to problems in reliability as data from samples are disaggregated, and the fact that only BLS has the technical capability for development of the matrices and projections at the present time and have staffing and time limitations.

Not all industries are covered under the OES Survey program. Data is not normally published for industries employing less than 1,000 persons or having less than a 70% response rate. If one or two firms are dominant in the industry and one or both do not give permission for their data to be released, the figures for that industry are not published. In addition to this limitation, no agricultural industries are included under the survey program.

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<sup>1</sup>A report will be available for the Columbia SMSA and the Joplin labor market area with the next round projections. Projections for most of the areas should be available during the first quarter of 1980.

OCCUPATIONAL STAFFING PATTERNS FOR MANUFACTURERS OF MEASURING,  
ANALYZING, AND CONTROLLING INSTRUMENTS; PHOTOGRAPHIC,  
MEDICAL, AND OPTICAL GOODS; WATCHES AND CLOCKS - JUNE, 1977

SIC 38

Industry Characteristics Summary This major industry group includes firms manufacturing instruments for measuring, testing, analyzing, and controlling, and their associated sensors and accessories; optical instruments and lenses; survey and drafting instruments; surgical, medical, dental, ophthalmic, and photographic instruments, equipment and supplies; and watches and clocks.

<u>OCCUPATION TITLE</u>	<u>EMPLOYMENT</u> <sup>1/</sup>	<u>RELATIVE ERROR %</u>	<u>PERCENTAGE DIST.<sup>2/</sup> OF EMPLOYMENT</u>
TOTAL EMPLOYMENT <sup>3/</sup>	7,420	NA	100.00
Managers and Officers	510	NA	6.86
Managers and Officers	510	27.21	6.86
Professional and Technical	580	NA	7.81
Professional	370	NA	4.93
Electrical and Electronic			
Engineer	100	20.22	1.34
Industrial Engineer	50	13.22	0.66
Mechanical Engineer	70	10.34	0.90
Purchasing Agent/Buyer	40	10.75	0.48
Accountants and Auditors	40	10.52	0.51
Personnel/Labor Relat Specialist	20	13.33	0.20
Technical	210	NA	2.88
Drafter	20	14.28	0.28
Electrical and Electronic Tech	80	38.94	1.11
Mechanical Engineering Tech	20	18.23	0.25
Science Technicians	30	12.47	0.40
All Other Technicians	20	49.65	0.25
Service Occupations	120	NA	1.67
Janitors, Porters and Cleaners	110	13.83	1.44
Mining, Processing, and Construction Occupations	5,050	NA	68.07
Supervisor, Nonworking	220	6.94	3.02
Mechanic, Maintenance	160	13.16	2.11
All Other Mechanics and Repairers	20	17.67	0.21
Electrician	20	13.33	0.20
Filers, Grinders, Etc.	80	39.34	1.10
Industrial Truck Operator	40	12.72	0.48
Inspector	150	9.79	1.99
Lens Grinder	80	34.80	1.09
Machinist	40	13.91	0.53

### SALES WORKERS 1/

#### Employment

Average Annual Job  
Openings, 1974-1985

	<u>1974</u>	<u>Estimated 1978</u>	<u>Projected 1985</u>	<u>Growth</u>	<u>Quits, Deaths, Retire- ments</u>	<u>Total</u>
Sales Workers	65,130	67,150	70,690	510	3,010	3,520
Advertising Agents, Sales Wrks	1,270	1,440	1,750	40	50	90
Auctioneers	20	20	20	0	0	0
Demonstrators	590	670	810	20	20	40
Hucksters and Peddlers	2,230	2,410	2,740	50	100	150
Insurance Agents, Brokers, Etc	5,670	5,730	5,830	10	210	220
Newspaper Carrier and Vendor	1,070	1,040	980	-10	20	10
Real Estate Agents, Brokers	4,280	4,320	4,390	10	340	350
Stock and Bond Sales Agents	1,530	1,540	1,560	0	90	90
Sales and Sales Workers, Nec	48,480	49,990	52,620	380	2,180	2,560

1/ Sums of items may not balance due to rounding.

In relation to other occupational groups, the Sales category is fairly small. Only Laborers, Except Farm and Farmers and Farm Workers employ fewer persons. The class is expanding, however. From 1974 to 1985, employment is projected to increase from 65,130 to 70,690, a gain of about 9 percent.

Job opportunities should be best for those Sales Workers employed in Insurance and Real Estate firms. More than 200 average annual job openings for Insurance Agents, Brokers and

for Real Estate Agents, Brokers are projected.

Few employment opportunities for Auctioneers; Demonstrators; and Newspaper Carriers and Vendors are expected to open up. These occupations presently employ relatively few workers. Replacement needs are thus limited.

There may be a gradual decline in the total number of Newspaper Carriers and Vendors from 1974 to 1985. More efficient systems of delivery and billing may cause employment in this occupation to fall.

RESOURCE: Occupational Outlook Handbook

FORMAT OR DELIVERY MEDIUM: Volume

GEOGRAPHIC COVERAGE: National

RELEASE SCHEDULE: Published Annually

PRODUCING AGENCY: Bureau of Labor Statistics

AVAILABILITY: available in Public Libraries and for sale by the Superintendent of Documents, U.S. Government Printing Office, Washington, D.C. 20402.

DATA ITEM: Occupational descriptions (i.e. earnings, job duties, educational requirements.)

DESCRIPTION: The Occupational Outlook Handbook, prepared by the Bureau of Labor Statistics, contains statements on more than 850 occupations and 30 industries about job duties, educational requirements, employment outlook and earnings. Information is also provided on places of employment, working conditions, and the estimated supply of workers for some occupations. The strengths and weaknesses of the information contained in the handbook are contingent upon the data sources utilized. Supply estimates are based on past trends and knowledge of school enrollments and apprenticeship programs. Information for each occupation is derived from a variety of sources, including: business firms, trade associations, labor unions, professional societies, educational institutions, and government agencies. The handbook presents a composite description for occupations and industries, reflecting general national trends rather than specific work situations or wages which vary with establishment or locality.

The handbook contains an introductory section explaining how to use it, where to go for further information, and how employment projections are made, and a special section on where the jobs will be in the future. The statements as to future job availability stem from the Occupational Employment Statistics program. There are over 300 occupational briefs or statements grouped into 13 clusters of related jobs. These are indexed according to Dictionary of Occupational Titles coding, referenced to the 3rd edition and cross referenced to the 4th edition. Thirty-five industry briefs are provided and grouped according to major divisions in the economy. Both industries and occupations are indexed alphabetically.

The Bureau of Labor Statistics also publishes the Occupational Outlook Quarterly which supplements the handbook with information on apprenticeship programs, counseling, and other occupational issues.

RESOURCE: Census of Population

FORMAT OR DELIVERY MEDIUM: Volumes and more detailed information is available from computer tapes.

GEOGRAPHIC COVERAGE: Nation, state, and sub-state areas.

RELEASE SCHEDULE: The Census is taken every 10 years, starting with 1980 it will be taken every 5 years in April. The information is available 2 to 3 years after the Census is taken.

AVAILABILITY: The published volumes are available in Missouri's resource libraries and are for sale by the Superintendent of Documents, U.S. Government Printing Office, Washington, D.C. 20402. More detailed information for Missouri sub-state areas is available from the Public Affairs Information Service, 10 Professional Building, Columbia, MO 65102 with a charge for computer services.

PRODUCING AGENCY: Bureau of the Census

DATA ITEM: Population characteristics (i.e. race, sex, age, residence, etc.)

DESCRIPTION: The Census of Population is taken each decennial census year and is the only attempt to make a complete enumeration of the entire population of the United States. Information is collected on the size, residence, and general characteristics of the labor force and non-labor force populations.

Although the enumeration takes place at the beginning of April, employment data refers to the week preceding the enumeration and to the occupation at which the respondent spent the greatest number of hours during the survey week. This timing results in short-time or under-age workers who enter the labor force later in the year being missed by the Census. This particularly affects the accuracy of the

count of farm workers. Employment data from the Census may also differ from that of other series which record employment in a more active part of the year.

The labor force definition for the Censuses of 1940, 1950, and 1960 covered 14 year olds and over. Coverage was changed to 16 years and over with the 1970 Census but a 20% sample of 14 and 15 year olds was taken for comparability between censuses.<sup>1</sup> Changes in the industrial classification of certain activities as well as changes in the structure of industrial detail also create some problems in comparability. In such cases, industrial groups have been aggregated to provide for better continuity of data.

The Census is conducted through the use of questionnaires. About three-fifths of the population, those living in large metropolitan areas and adjacent counties, received the questionnaires by mail with a follow-up made if the information provided by the respondent was inconsistent or incomplete. The other two-fifths of the population received

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<sup>1</sup> The Census definition of employment, as of the 1970 Census, is: "Employed persons comprise all civilians 16 years old and over who were either (a) 'at work'--those who did any work at all as paid employees or in their own business or profession, or on their own farm, or who worked 15 hours or more as unpaid workers on a family farm or in a family business; or (b) were 'with a job but not at work' --those who did not work during the reference week but had jobs or businesses from which they were temporarily absent due to illness, bad weather, industrial dispute, vacation, or other personal reasons. Excluded from the employed are persons whose only activity consisted of work around the house or volunteer work for religious, charitable and similar organizations." U.S. Dept. of Commerce, Bureau of the Census, Census of Population: 1970, U.S. Govt. Printing Office, Wash., D.C., 1972.

personal visits from enumerators, or census clerks. Three types of questionnaires were used. One set of questions addressed to the entire population, 15% of the population were asked additional questions, and even more detailed information was collected from another 5% of the population. The households receiving the sample questionnaires were randomly selected.

Although the data is screened and edited with appropriate follow-ups and revisions made, the user should exercise caution in the interpretation of data for very small areas. These data are especially subject to the effects of sampling error, misreporting, and processing errors.

A wide variety of materials prepared from the 1970 Census are available for Missouri. The following series of reports are published by the Bureau of the Census and are available for each state.<sup>1</sup>

Number of Inhabitants contains statistics on the number of inhabitants of the state and sub-state areas. The data is classified by urban and rural residence, size of place or population, number of inhabitants by county subdivisions, and incorporated and unincorporated places. Data is provided by county, county subdivisions, and

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<sup>1</sup>These reports are now bound into a single volume for each state, entitled, Characteristics of the Population, Vol. 1. U.S. Bureau of the Census, Census of Population: 1970.

urbanized areas and component parts.<sup>1</sup> Information in this report is derived from data collected in the complete enumeration of the population.

General Population Characteristics provides information on basic demographic characteristics; race, sex, age, number of persons 14 years and older that are married, and type of households and family characteristics.<sup>2</sup> For urbanized areas and areas with a population of 50,000 or more,<sup>3</sup> data is provided on: age by race and sex, household relationship and type of family by race, and various cross-classifications of the same data. For places with populations between 10,000 and 50,000, information is provided for age, race, and sex, with the three categories cross-classified. The same information is available for areas of 2,500 to 10,000 but the information is not cross-classified. Data prepared for counties includes; age, race, sex, marital status, and some household characteristics, with various cross-classifications of the data. Information from this report

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<sup>1</sup>For Missouri, these areas are: The SMSAs (Columbia, Kansas City, St. Louis, St. Joseph, and Springfield), Florissant, and Independence. Data for the SMSAs is broken down into the city itself and each of the surrounding counties.

<sup>2</sup>"Type of household and family characteristics" refers to information such as marital status; whether the household head is male, female, or both; the number of children; and the relationship of persons in the household to the head of the household.

<sup>3</sup>This refers to the same areas as listed in footnote one.

is derived from the complete enumeration of the population rather than the samples.

General Social and Economic Characteristics contains information on the characteristics of the labor force and non-labor force population such as: education; industry, occupation, and labor mobility of employed persons; income; poverty status; veteran status; and ethnic characteristics. Part of the data contained in this report is derived from the sample rather than the enumeration of the population.

For urbanized areas and places with a population of 50,000 or more,<sup>1</sup> all of the above information is reported as well as characteristics of the Negro and Spanish populations. Information for Negro and Spanish persons includes information on social characteristics such as years of school completed and number of children, and employment characteristics such as occupation and earnings. The same data is provided for counties with the addition of rural nonfarm and farm characteristics of the population. This same information is presented by county with the exception that no ethnic characteristics are included and the last occupation of unemployed Negro and Spanish persons are not reported. For places with populations between 2,500 and 10,000, information is provided for place of birth (whether

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<sup>1</sup>For Missouri, these are: the SMSAs (Columbia, Kansas City, St. Louis, St. Joseph, and Springfield), Independence and Florissant.

foreign or native), school enrollment, employment status, employment by occupation and industry with limited categories, and income.

Detailed Characteristics contains detailed categories and cross-classifications by urban, rural nonfarm, and rural farm residence for the state, larger cities and SMSAs. Information provided in this report includes: birth place, school enrollment, and vocational training by five broad categories.<sup>1</sup> Other information on those individuals with vocational training includes; employment status, occupation, and earnings. Much of the information presented in General Social and Economic Characteristics is repeated in this report, such as employment status and household characteristics of the population. Data from both these reports is taken from the Census samples as well as the complete enumeration.

Information for places with populations of 250,000 or more includes information on citizenship, nativity, and race, as well as mother tongue of the population. The same information except the mother tongue of the population is available for areas of 100,000 or more persons.

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<sup>1</sup>These vocational categories are: Business or Office Work, Nursing or Health Field, Engineering or Science Technician, Agriculture or Home Economics, and Other.

Census Tracts are available for Missouri's SMSAs; (Kansas City, St. Louis, Columbia, Springfield, and St. Joseph), and contain information on the populations such as: race, sex, age, type of family or household, income and nativity. Special information is available for tracts containing populations of 400 or more Negro or Spanish persons.

A number of other reports have been prepared for Missouri that use 1970 Census information. This inventory will provide an overview of only a few of these reports.<sup>1</sup>

Missouri Population Estimates and Projections was prepared initially in 1974 and was revised in 1977. It contains population estimates and projections by county for 1977 through 1990. This data is not broken down into population characteristics such as age and sex.

Census Manpower Packages are prepared by the U.S. Department of Labor and contain manpower data for a large number of Census areas. The coverage varies by "package" but usually contain data for SMSAs and counties as well as state summary data. Types of information provided by these reports include: industry structures, occupational structures, manpower characteristics by industry and occupation broken out into male and female.

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<sup>1</sup>For further information on other reports that have been prepared from 1970 Census information, contact the Missouri State Library. Public libraries have a wealth of census related publications as well.

Missouri: Demographic-Economic Analysis examines past, present, and projected trends in population and economic activity for Missouri counties. Data is presented in a tabular form with short narratives explaining the meaning and interpretation of the statistics provided. Demographic variables include: population growth, density, and projections; urban and rural distribution; age and sex composition; color characteristics (only broken out into white and non-white); educational achievement, household characteristics; and fertility, mortality, and migration trends. Economic variables include: number of employees, projected changes in employment, payrolls, personal income by industry, civilian labor force, as well as various measures of real wealth.

Census data is primarily used for the demographic characteristics, with information provided by county and for the state. Data for the economic characteristics of counties is drawn primarily from U.S. Government sources such as the Bureau of Economic Analysis' projections and County Business Patterns.

As a result of this study, 21 counties were identified as growth regions. A more in depth report on these areas is contained in a supplementary report, Missouri: Demographic-Economic Profiles of Growth Regions.

Structure of Missouri Industry--State and Regions:  
1940 to 1970 is an extract from a national data source,

Regional Employment by Industry, 1940 to 1970.<sup>1</sup> The report, prepared for each of Missouri's regional planning commission areas, contains information on the structure of Missouri industry. The report provides an overview explaining changes in employment taking place in Missouri and it's regional areas. Industries are classified into 35 industry groups for the Censuses between 1950 and 1970, and 30 industry groups for the 1940 Census. The report provides Standard Industrial Classification code designations for Census industry groupings. However, these are provided for general information only and are not meant to imply complete comparability.

Six tables are available for the state and each area.

The tables present:

- Employment by industry for 1940, 1950, 1960, and 1970
- Percentage breakdown by industry of total employment for the four time periods
- Each region's percentage share of the state's employment by industry for the four time periods
- Percentage of the population employed in each industry
- Location quotients: a comparison of the distribution of employment by industry in each of the regions with the distribution for the state.

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<sup>1</sup> Regional Employment by Industry, 1940-1970, U.S. Dept. of Commerce, Bureau of Economic Analysis.

Missouri Employment by Industry 1940 to 1970 is also an extract from Regional Employment by Industry and presents employment by industry for 1940, 1950, 1960, and 1970, by county. There are 30 Census industry groupings for 1940 and 35 groupings for the Censuses taken thereafter.

Table 150. Social and Economic Characteristics of Persons 18 Years Old and Over by Field of Vocational Training, Race, and Sex: 1970—Continued

[Data based on sample, see text. For minimum base for derived figures (percent, median, etc.) and meaning of symbols, see text]

The State	Total with vocational training	Field of vocational training						Not reported					
		Business or office work	Nursing or other health field	Trades and crafts	Engineering or science technician		Agriculture or home economics						
							Other						
<b>NEGRO</b>													
<b>Years of School Completed</b>													
Male, 18 years old and over	33 099	2 549	920	12 071	1 403	636	1 016	14 414					
Elementary: 0 to 4 years	2 095	—	53	287	66	22	—	1 667					
5 years	804	—	—	231	—	—	68	573					
6 to 8 years	5 010	152	—	1 641	166	96	—	2 887					
High school: 1 to 3 years	8 012	429	167	3 559	154	210	271	3 222					
4 years	11 961	1 122	427	4 894	551	244	435	4 288					
College: 1 and 2 years	3 452	506	175	1 113	328	29	103	1 198					
3 years	472	68	—	64	110	18	44	168					
4 years or more	1 293	272	98	282	118	17	95	411					
Female, 18 years old and over	39 404	8 157	7 489	4 371	324	971	1 271	16 821					
Elementary: 0 to 4 years	1 785	82	140	62	44	16	—	1 441					
5 years	542	—	53	21	—	—	176	452					
6 to 8 years	5 144	152	755	483	—	86	210	3 493					
High school: 1 to 3 years	9 248	1 396	2 122	1 378	—	256	279	3 886					
4 years	14 424	4 322	2 723	1 961	77	376	213	4 686					
College: 1 and 2 years	5 414	1 839	1 192	379	103	122	35	1 566					
3 years	916	264	207	46	51	—	358	313					
4 years or more	1 931	102	297	41	49	99	358	985					
<b>Persons 18 to 64 years old with less than 3 years of college and not enrolled in school:</b>													
<b>Employment Status</b>													
Male <sup>1</sup>	26 890	2 017	759	11 019	1 126	519	846	10 604					
Civilian labor force	21 154	1 951	560	9 008	915	431	573	7 716					
Employed	19 617	1 895	560	8 359	837	386	524	7 056					
Unemployed	1 537	56	—	649	78	45	49	660					
Not in civilian labor force	4 458	30	162	1 422	131	19	164	2 530					
Female <sup>1</sup>	30 724	6 977	6 532	4 028	157	782	735	11 513					
Civilian labor force	21 759	5 411	5 029	2 720	126	567	505	7 401					
Employed	19 912	4 826	4 741	2 482	126	511	455	6 771					
Unemployed	1 847	585	288	238	—	56	50	630					
Not in civilian labor force	8 887	1 546	1 483	1 270	31	215	230	4 112					
<b>Occupation of the Employed</b>													
Male	19 617	1 895	560	8 359	837	386	524	7 056					
Professional, technical, and kindred workers	892	56	143	245	180	—	—	268					
Managers and administrators, except farm	540	62	20	274	—	—	—	184					
Sales workers	458	136	22	136	—	—	—	164					
Clerical and kindred workers	2 390	670	52	990	78	32	50	518					
Craftsmen and kindred workers	3 290	130	22	1 842	237	101	106	852					
Operatives, except transport	4 562	285	74	1 895	110	49	79	2 070					
Transport equipment operatives	1 629	103	15	750	44	58	139	520					
Laborers, except farm	2 266	295	22	705	55	89	44	1 056					
Farmers and farm managers	37	—	—	—	—	37	—	122					
Form laborers and farm foremen	163	—	—	41	—	—	106	1 302					
Service workers, including private household	3 390	158	190	1 481	133	20	106	1 302					
Female	19 912	4 826	4 741	2 482	126	511	455	6 771					
Professional, technical, and kindred workers	2 578	324	1 352	131	29	79	30	633					
Managers and administrators, except farm	234	56	76	—	—	—	102	151					
Sales workers	433	160	43	57	—	22	36	990					
Clerical and kindred workers	5 366	3 301	514	356	20	30	149	213					
Craftsmen and kindred workers	380	23	12	102	—	—	80	840					
Operatives, except transport	2 144	296	263	552	14	99	—	18					
Transport equipment operatives	51	—	—	—	33	—	17	250					
Laborers, except farm	408	75	—	47	—	19	—	180					
Form workers	222	—	22	20	—	—	210	2 338					
Service workers, except private household	6 775	575	2 358	1 133	—	—	161	1 056					
Private household workers	1 321	16	101	84	—	46	18	1 056					
<b>Earnings of Persons in 1969</b>													
Male, with earnings	23 466	1 916	677	10 202	1 032	500	761	8 378					
\$1 to \$999 or less	1 680	90	88	477	78	76	93	778					
\$1,000 to \$1,999	1 241	47	37	557	70	50	43	437					
\$2,000 to \$2,999	1 434	98	17	592	42	—	38	647					
\$3,000 to \$4,999	4 523	198	96	2 008	165	98	190	1 768					
\$5,000 to \$5,999	2 458	287	—	926	115	84	77	969					
\$6,000 to \$6,999	2 690	286	232	1 186	75	108	16	787					
\$7,000 to \$7,999	3 108	268	104	1 597	146	20	96	877					
\$8,000 to \$8,999	2 337	323	17	914	174	30	75	804					
\$9,000 to \$9,999	1 063	161	18	396	38	—	25	425					
\$10,000 to \$14,999	1 306	112	18	613	106	19	44	394					
\$15,000 or more	1 626	46	50	936	23	15	64	492					
Median earnings	\$4 148	\$6 832	\$6 433	\$6 456	\$6 613	\$5 310	\$5 214	\$5 577					
Female, with earnings	23 454	6 000	5 533	3 023	126	590	540	7 642					
\$1 to \$999 or less	3 985	847	951	528	—	119	69	1 471					
\$1,000 to \$1,999	3 133	610	576	361	—	136	112	1 338					
\$2,000 to \$2,999	2 759	549	556	366	30	76	91	1 091					
\$3,000 to \$4,999	7 942	2 207	1 693	1 062	67	216	183	2 514					
\$5,000 to \$5,999	1 878	741	663	97	—	21	—	356					
\$6,000 to \$6,999	1 271	565	426	79	29	—	68	133					
\$7,000 to \$7,999	688	216	199	90	—	—	—	154					
\$8,000 to \$8,999	499	89	122	14	—	22	—	274					
\$9,000 to \$9,999	166	—	24	—	—	—	—	120					
\$10,000 to \$14,999	310	55	172	—	—	—	—	83					
\$15,000 or more	823	121	151	426	—	—	17	108					
Median earnings	\$3 385	\$3 909	\$3 638	\$3 358	—	\$2 526	\$2 978	\$2 928					

<sup>1</sup>Includes members of the Armed Forces not shown separately.

Sample page from Detailed Characteristics

RESOURCE: Job Openings Information Program

FORMAT OR DELIVERY MEDIUM: Printed report and microfiche

GEOGRAPHIC COVERAGE: Nation, state, and Job Bank Districts

RELEASE SCHEDULE: Published monthly

PRODUCING AGENCY: Employment and Training Administration

AVAILABILITY: Available upon request at local Job Service Office, contact local labor market analyst.

DATA ITEM: Job openings by state and local area; occupational category; industry; average pay; education and skill requirements.

DESCRIPTION: The Job Openings Information Program is designed to provide information on job openings received by individual Job Service Offices. As the most comprehensive data on job openings in the United States, this information can be used by school counselors, manpower planners, job seekers, researchers, and students. The Job Openings Information Program is conducted through the use of two data sources, Job Bank Openings Summary (JBOS) and Job Bank Frequently Listed Openings (JOB-FLO).

Job Bank Openings Summary (JBOS): JBOS is a monthly report with information on local and national job openings for 800 occupations listed during the preceding month with the Job Service. The data appears on microfiche with the following information for job openings: state and local area, number of job openings, number unfilled at end of month, number 30 days old or more, occupational category with six digit Dictionary of Occupational Titles coding,

employer job title, and pay range.<sup>1</sup>

The first card of the microfiche contains a guide explaining how to use the microfiche and how to locate specific openings. The data is cross-referenced occupation-by-area and area-by-occupation. A paper version of the guide is also available.

Job Bank Frequently Listed Openings (JOB-FLO): JOB-FLO provides information on 350 demand occupations for which there is a relatively large number of job listings the preceding month with the Job Service offices.<sup>2</sup> In addition to identifying the occupations in demand for each area, information is reported as to the industries of employers seeking new workers, number of openings listed for these

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<sup>1</sup> Wage ranges may be too broad to give the specificity desired by an individual user.

<sup>2</sup> Selection of occupations for the JOB-FLO report is based upon the following criteria for full-time, permanent job openings:

- at least 20 openings for a specific occupation must have been reported available at some time during the previous month in Job Bank Districts with a total of 1,000 to 1,999 job openings. Openings selected in larger districts must have reported more openings available.
- occupations also may be selected that meet criteria regarding the number of openings unfilled at month's end, or for 30 days or more. The requirements for the number of openings and length of time the position remains unfilled varies by the total number of openings listed with a specific Job Bank District. The unfilled openings criteria does not come into consideration unless the occupation had at least 20 openings available, regardless of the total number of vacancies in the Job Bank District.

occupations, average pay, and employer education and skill requirements.

Data are available in both hard-copy and microfiche forms and are arranged according to six digit Dictionary of Occupational Titles coding and employer job titles. Jobs are cross-referenced by occupation and local geographic area. Industries are listed at the 4 digit Standard Industrial Classification level of detail. A guide is provided with both the paper and microfiche version of the report indicating how to locate specific openings and areas.

The user should be aware that although openings were available in the preceeding month, they may not be currently available. Further, Job Service openings represent only part of total hiring activity and may not present an adequate picture for some occupations or areas. Jobs may go unfilled due to unsatisfactory wages or working conditions rather than lack of local labor supply.

<b>ACCOUNTANT</b> OPENINGS AVAILABLE- 1,750 AVERAGE PAY-\$11,978 PER YEAR	PHOENIX BALTIMORE NORTHEAST	AZ * SAN JOSE MD * DETROIT WI * SOUTHEAST	CA * STATEWIDE MI * ST. LOUIS WI *	CT * STATEWIDE MO *	STATEWIDE NEW YORK CITY	DE * FORT DODGE NY * STATEWIDE	IA VT
<b>ADMINISTRATIVE SECRETARY</b> OPENINGS AVAILABLE- 2,926 AVERAGE PAY-\$ 9,267 PER YEAR	PHOENIX SAN JOSE ATLANTA SPRINGFIELD MINEAP-STPAUL ALLENTOWN HOUSTON	AZ * TUCSON CA * STATEWIDE GA * FORT DODGE MA * WORCESTER MN * KANSAS CITY PA * HARRISBURG TX * STATEWIDE	AZ * LA METRO CT * WASH DC METRO IA * CHICAGO METRO MA * BALTIMORE MO * CENTRAL PA * PHILADELPHIA VT * NORTHEAST	CA * SACRAMENTO DC * STATEWIDE IL * BOSTON METRO MD * STATEWIDE MS * ALBANY PA * PROVIDENCE WI * SOUTHEAST	CA * SAN GABRIEL DE * ORLANDO MA * LAWRENCE ME * DETROIT NY * NEW YORK CITY RI * AUSTIN WI *	CA FL MA MI NY TX	CA FL MA MI NY TX
<b>ASSISTANT PROFESSOR</b> OPENINGS AVAILABLE- 833 AVERAGE PAY-\$12,304 PER YEAR	PHOENIX ROCHESTER SAN ANTONIO	AZ * STATEWIDE NY * UTICA/ROME TX *	ME * OMAHA NY * PHILADELPHIA	NB * ALBANY PA *	ALBANY STATEWIDE	NY * NEW YORK CITY SD * DALLAS	NY TX
<b>CASE AID</b> OPENINGS AVAILABLE- 737 AVERAGE PAY-\$ 7,098 PER YEAR	JACKSONVILLE HARRISBURG	FL * ATLANTA PA *	GA * BALTIMORE	MD *	NORTHERN	MS * TOLEDO	OH
<b>CASEWORK SUPERVISOR</b> OPENINGS AVAILABLE- 1,237 AVERAGE PAY-\$ 8,249 PER YEAR	SAN JOSE ST. LOUIS	CA * STATEWIDE MO * NORTHERN	CT * QUAD CITIES MS *	IA * SPRINGFIELD OR *	MADISON	MA * BALTIMORE WI * NORTHEAST	MD WI
<b>COMPUTER PROGRAMMER</b> OPENINGS AVAILABLE- 2,496 AVERAGE PAY-\$13,011 PER YEAR	PHOENIX WASH DC METRO DETROIT GREENSBORO BUFFALO PHILADELPHIA NORFOLK	AZ * LA METRO DC * CHICAGO METRO MI * MINEAP-STPAUL NC * NEWARK NY * LONG ISLAND PA * PITTSBURGH VA *	CA * SAN FERNANDO BOSTON METRO IL * KANSAS CITY MO * ST. LOUIS NJ * PATERSON NY * NEW YORK CITY PA * DALLAS TX *	CA * SAN JOSE MA * SPRINGFIELD MO * ST. LOUIS NJ * TRENTON NY * ROCHESTER TX * FORT WORTH	CA * STATEWIDE MA * BALTIMORE MO * OMAHA NR * ALBANY NY * DAYTON TX * HOUSTON	CT "D NY OH	CT
<b>ELECTRICAL ENGINEER</b> OPENINGS AVAILABLE- 2,272 AVERAGE PAY-\$15,709 PER YEAR	PHOENIX WASH DC METRO BALTIMORE ALBANY YOUNGSTOWN	AZ * SAN FERNANDO DC * ORLANDO MD * MINEAP-STPAUL NY * BINGHAMTON OH * DALLAS	CA * SAN GABRIEL FL * CHICAGO METRO MN * ST. LOUIS NY * LONG ISLAND TX * HOUSTON	CA * SAN JOSE BOSTON METRO MO * NEWARK NJ * TRENTON NY * ROCHESTER TX *	CA * STATEWIDE MA * WORCESTER NJ * TRENTON OH * DAYTON	CT MA NJ OH	CT
<b>ELECTRONIC TECHNICIAN</b> OPENINGS AVAILABLE- 1,330 AVERAGE PAY-\$10,334 PER YEAR	HUNTSVILLE SAN GABRIEL LAWRENCE LONG ISLAND DALLAS	AL * PHOENIX CA * SAN JOSE MA * WORCESTER NY * MID HUDSON TX * HOUSTON	AZ * LA METRO CA * STATEWIDE MA * BALTIMORE NY * ROCHESTER TX *	CA * ORANGE COUNTY CT * WASH DC METRO MD * MINEAP-STPAUL NY * CLEVELAND OH *	CA * SAN FERNANDO MA * BOSTON METRO MN * BUFFALO PA * PHILADELPHIA	CA MA	CA MA
<b>EMPLOYMENT INTERVIEWER</b> OPENINGS AVAILABLE- 1,245 AVERAGE PAY-\$ 8,875 PER YEAR	WORCESTER DAYTON	MA * BALTIMORE OH * TOLEDO	MD * CHARLOTTE OH *	NC * CINCINNATI	OH * COLUMBUS	OH	OH
<b>ENGINEERING ASSISTANT</b> OPENINGS AVAILABLE- 793 AVERAGE PAY-\$12,692 PER YEAR	PHOENIX SYRACUSE	AZ * STATEWIDE NY * CLEVELAND	CT * ORLANDO OH *	FL * DETROIT	MI * ROCHESTER	NY	
<b>GUIDANCE COUNSELOR</b> OPENINGS AVAILABLE- 1,579 AVERAGE PAY-\$ 9,125 PER YEAR	PHOENIX LAWRENCE ALBANY	AZ * SAN JOSE MA * SPRINGFIELD NY * COLUMBUS	CA * STATEWIDE MA * TAUNTON OH * MIDDLE	CT * JACKSONVILLE MA * MINEAP-STPAUL TN * STATEWIDE VT *	FL * BOSTON METRO MN * NORTHWEST VT *	MA MN	
<b>INDUSTRIAL ENGINEER</b> OPENINGS AVAILABLE- 1,427 AVERAGE PAY-\$13,858 PER YEAR	LA METRO BALTIMORE ROCHESTER	CA * SAN JOSE MD * DETROIT NY * YOUNGSTOWN	CA * STATEWIDE MI * BUFFALO OH * HOUSTON	CT * CHICAGO METRO NY * LONG ISLAND TX * MADISON	IL * WORCESTER NY * NEW YORK CITY WI *	MA NY	
<b>MANAGER TRAINEE</b>	STATEWIDE	CT * WASH DC METRO	DC * QUAD CITIES	IA * TOPEKA	KS * NEW ORLEANS	LA	

RESOURCE: BLS Area Wage Survey

FORMAT OR DELIVERY MEDIUM: Printed pamphlet

GEOGRAPHIC COVERAGE: St. Louis and Kansas City SMSAs

RELEASE SCHEDULE: Published annually, in September for  
Kansas City and March for St. Louis.

PRODUCING AGENCY: Bureau of Labor Statistics

AVAILABILITY: Available upon request from regional BLS  
office.

DATA ITEM: Wages for selected occupations by skill level;  
minimum entrance rates for inexperienced workers;  
limited information on fringe benefits.

DESCRIPTION: These surveys are conducted annually by the Bureau of Labor Statistics to provide data on occupations common to a wide variety of industries. Seventy SMSAs throughout the nation are surveyed to analyze the level and distribution of wages by occupation and the movement of wages by occupational category and skill level. The surveys measure the level of occupational earnings in an area for a point in time.

Occupational earnings data is collected annually, with data collected for 76 occupational categories: 29 office clerical; 17 Electronic Data Processing, drafting and industrial nurses; 30 maintenance, toolroom, power plant and custodial and material movement jobs. Industry divisions covered are: manufacturing; transportation, communication and other public utilities; wholesale trade; retail trade; finance, insurance and real estate; and selected service industries. Government operations, construction, and extractive industries are excluded.

Information on establishment practices and supplementary wage benefits are obtained every third year with information collected on: weekly work schedules, paid holidays and vacation practices, and health, insurance and retirement benefits. The latter benefits are recorded separately for non-supervisory office workers and plant workers. Shift operations and differentials are collected for plant workers in manufacturing. Data on minimum entrance rates for inexperienced office workers are collected in all industries.<sup>1</sup> Information is also collected on profit-sharing plans, sick leave plans, and wage payment systems.

In order to minimize costs, establishments are stratified by industry and number of employees. All firms with over 100 employees are surveyed and those with less are sampled. This results in a greater proportion of large rather than small establishments being surveyed, which may bias the average wages upward. General job descriptions, which allow for minor differences among establishments in specific duties performed, are provided with the survey and are included in the final reports.

Caution should be exercised in interpreting earnings and occupational employment data. Earnings data for specific job titles are for all industries combined and do

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<sup>1</sup>The measurement of minimum entrance salaries is more representative of medium to large establishments, as small firms are not as likely to have fixed wage scales.

not reflect differences in wages among industries. Pay averages may fail to reflect wage differentials between jobs in individual establishments due to the data being aggregated. Estimates of occupational employment obtained from a sample serve to indicate relative importance of jobs rather than absolute numerical values as occupational structures differ, particularly between establishments of varying sizes.

**Table A-6. Average hourly earnings of maintenance, toolroom, powerplant, material movement, and custodial workers, by sex, in St. Louis, Mo.—III., March 1978**

Sex, <sup>3</sup> occupation, and industry division	Number of workers	Average (mean <sup>2</sup> ) hourly earnings <sup>4</sup>	Sex, <sup>3</sup> occupation, and industry division	Number of workers	Average (mean <sup>2</sup> ) hourly earnings <sup>4</sup>	Sex, <sup>3</sup> occupation, and industry division	Number of workers	Average (mean <sup>2</sup> ) hourly earnings <sup>4</sup>
<b>MAINTENANCE, TOOLROOM, AND POWERPLANT OCCUPATIONS - MEN</b>								
MAINTENANCE CARPENTERS	316	7.54	MATERIAL MOVEMENT AND CUSTODIAL OCCUPATIONS - MEN--CONTINUED			MATERIAL MOVEMENT AND CUSTODIAL OCCUPATIONS - MEN--CONTINUED		
MANUFACTURING	279	7.60	TRUCKDRIVERS - CONTINUED	3	\$	POWER-TRUCK OPERATORS (OTHER THAN FORKLIFT)	156	6.70
MAINTENANCE ELECTRICIANS	2,053	8.38	TRUCKDRIVERS, MEDIUM TRUCK	2,189	7.61	MANUFACTURING	117	6.60
MANUFACTURING	1,775	8.53	NONMANUFACTURING	624	7.16	GUARDS AND WATCHMEN	3,506	3.80
MAINTENANCE PAINTERS	250	7.77	WHOLESALE TRADE	1,565	7.79	MANUFACTURING	723	6.81
MANUFACTURING	214	8.08	TRUCKDRIVERS, HEAVY TRUCK (TRAILER)	2,060	8.26	NONMANUFACTURING	2,583	2.96
MAINTENANCE MACHINISTS	1,752	8.24	NONMANUFACTURING	1,498	8.31	PUBLIC UTILITIES	86	5.18
MANUFACTURING	1,595	8.19	PUBLIC UTILITIES	1,486	8.02	FINANCE	118	3.00
MAINTENANCE MECHANICS (MACHINERY)	2,151	7.21	WHOLESALE TRADE	354	7.36	SERVICES	2,304	2.81
MANUFACTURING	1,936	7.17	TRUCKDRIVERS, HEAVY TRUCK (OTHER THAN TRAILER)	207	7.32	GUARDS:		
NONMANUFACTURING	215	7.61	NONMANUFACTURING	160	7.67	MANUFACTURING	581	6.86
PUBLIC UTILITIES	101	8.49	PUBLIC UTILITIES	56	7.98	WATCHMEN:		
MAINTENANCE MECHANICS (MOTOR VEHICLES)	1,928	7.83	SHIPPING CLERKS	367	6.09	MANUFACTURING	142	6.59
MANUFACTURING	273	8.14	MANUFACTURING	217	5.83	JANITORS, PORTERS, AND CLEANERS	4,362	4.59
NONMANUFACTURING	1,655	7.78	NONMANUFACTURING	150	6.47	MANUFACTURING	1,942	6.00
PUBLIC UTILITIES	1,199	7.54	WHOLESALE TRADE	124	6.70	NONMANUFACTURING	2,420	3.45
MAINTENANCE PIPEFITTERS	1,216	8.53	RECEIVING CLERKS	665	6.14	PUBLIC UTILITIES	296	5.73
MANUFACTURING	1,092	8.50	MANUFACTURING	439	6.10	WHOLESALE TRADE	116	5.54
MAINTENANCE SHEET-METAL WORKERS	191	8.11	NONMANUFACTURING	226	6.19	Retail TRADE	250	3.85
MANUFACTURING	187	8.13	WHOLESALE TRADE	150	6.26	FINANCE	121	3.16
HILLWRIGHTS	755	8.60	SHIPPING AND RECEIVING CLERKS	485	6.11	SERVICES	1,637	2.85
MANUFACTURING	755	8.60	MANUFACTURING	303	5.94	MATERIAL MOVEMENT AND CUSTODIAL OCCUPATIONS - WOMEN		
MAINTENANCE TRADES HELPERS	248	7.05	NONMANUFACTURING	182	6.38	SHIPPING CLERKS	50	5.54
MANUFACTURING	229	7.08	WHOLESALE TRADE	108	6.86	MANUFACTURING	50	5.54
MACHINE-TOOL OPERATORS (TOOLROOM)	688	7.85	WAREHOUSEMEN	1,524	6.65	SHIPPING AND RECEIVING CLERKS	52	5.08
MANUFACTURING	688	7.85	MANUFACTURING	678	6.05	ORDER FILLERS	475	5.39
TOOL AND DIE MAKERS	1,033	8.74	NONMANUFACTURING	846	7.14	NONMANUFACTURING	347	5.86
MANUFACTURING	1,033	8.74	WHOLESALE TRADE	558	7.05	WHOLESALE TRADE	300	6.70
STATIONARY ENGINEERS	360	7.82	ORDER FILLERS	2,233	6.25	SHIPPING PACKERS	484	4.61
MANUFACTURING	296	8.05	MANUFACTURING	453	5.60	MANUFACTURING	410	4.55
NONMANUFACTURING	64	6.78	NONMANUFACTURING	1,780	6.42	NONMANUFACTURING	74	4.99
BOILER TENDERS	218	7.21	WHOLESALE TRADE	1,353	6.53	FORKLIFT OPERATORS	62	5.97
MANUFACTURING	193	7.03	SHIPPING PACKERS	831	5.89	MANUFACTURING	62	5.97
MATERIAL MOVEMENT AND CUSTODIAL OCCUPATIONS - MEN			MANUFACTURING	552	5.97	GUARDS AND WATCHMEN	335	2.90
TRUCKDRIVERS	5,408	7.74	NONMANUFACTURING	279	5.73	NONMANUFACTURING	331	2.85
MANUFACTURING	957	7.16	PUBLIC UTILITIES	213	6.14	SERVICES	310	2.79
NONMANUFACTURING	4,451	7.84	WHOLESALE TRADE	5136	6.27	JANITORS, PORTERS, AND CLEANERS	2,135	3.54
PUBLIC UTILITIES	2,026	8.37	MANUFACTURING	2,048	5.11	NONMANUFACTURING	1,735	2.89
WHOLESALE TRADE	1,746	7.60	NONMANUFACTURING	1,088	7.21	PUBLIC UTILITIES	97	4.16
RETAIL TRADE	616	7.22	PUBLIC UTILITIES	613	8.22	RETAIL TRADE	99	2.81
TRUCKDRIVERS, LIGHT TRUCK	374	5.98	WHOLESALE TRADE	304	6.50	FINANCE	115	3.11
NONMANUFACTURING	334	6.00	FORKLIFT OPERATORS	3,351	6.73	SERVICES	1,474	2.82

See footnotes at end of tables.

RESOURCE: Joplin Wage Survey

FORMAT OR DELIVERY MEDIUM: Printed table

GEOGRAPHIC COVERAGE: Counties of Jasper, Newton, and McDonald (The Health Occupational Survey is not conducted in McDonald).

RELEASE SCHEDULE: Published annually in September

PRODUCING AGENCY: Joplin Job Service

AVAILABILITY: Available upon request from the Joplin Job Service, P.O. Box 1270, 730 Wall Avenue, Joplin, MO 64801 (417) 624-4311.

DATA ITEM: Employment by occupation; range of pay rates by occupation.

DESCRIPTION: The Joplin Job Service has conducted an annual wage survey for the past ten years. In addition, for the past two years health occupations in the Joplin area were surveyed as part of the continuing program. The regular survey is conducted in May and covers 44 industrial, professional and technical, and office worker occupations. The health survey covers 26 additional occupations and is conducted in September of each year. The surveys report the number of employees in each occupation, ranges of pay rates, and the median and weighted average rates for the occupations. Definitions of the occupational titles used and their Dictionary of Occupational Titles codes are included with the survey. Wage breakdowns by manufacturing, non-manufacturing, or industry are available upon request.

MISSOURI DIVISION OF EMPLOYMENT SECURITY  
 Straight Time Base Pay Rates by Occupation - Joplin, MO. Area - May, 1979  
 (Rates per Hour)

OCCUPATIONS	Average Rates	Median Rates	*Middle Low	Range High	Minimum Rates	Maximum Rates	No. of Employees
<b>INDUSTRIAL OCCUPATIONS</b>							
Assembler, Electronic	3.60	3.25	2.90	3.71	2.90	5.70	278
Assembler, Production	4.25	3.85	3.43	4.78	2.90	7.32	1340
Drill or Punch Press Operator	4.23	3.53	3.37	4.88	3.37	7.29	191
Inspector, General	4.77	4.15	3.71	5.80	2.90	11.29	150
Machine Set-Up Operator	6.10	6.43	4.84	7.41	3.90	7.41	115
Machinists	5.01	5.26	3.48	5.77	3.00	8.65	238
Machinist, Wood (Woodworking)	5.07	5.35	4.00	5.80	2.95	7.36	49
Prod. Mach. Oper. (Gen. Mfg.)	5.58	5.45	4.70	6.90	2.90	7.36	454
Prod. Mach. Oper. (Mach. Shop)	5.96	5.84	5.33	6.14	4.10	7.40	104
Sheet Metal Prod. Worker	5.09	4.72	4.32	6.32	3.00	7.00	104
Tool & Die Maker	6.95	7.14	6.48	7.15	3.75	8.51	58
Welder, Combination	4.99	5.00	3.90	5.55	3.25	8.52	191
Welding, Machine Operator	3.84	3.21	3.15	4.88	3.15	5.72	204
Diesel Engine Mechanic	6.31	6.50	5.45	7.36	4.00	7.90	31
Electrician	6.64	6.46	5.92	8.30	3.90	8.52	55
General Delivery Driver(local)	5.22	5.25	5.00	5.50	3.10	7.30	59
Maintenance Mechanic	5.79	5.75	5.31	6.43	3.00	10.18	215
Maintenance Repairer(Factory)	5.05	5.00	4.63	5.63	3.10	7.30	182
Material Handler	4.32	3.98	3.54	4.95	2.90	7.79	699
Packager	5.11	5.35	4.10	6.69	2.90	7.30	306
Porter, Janitor, Cleaner	4.15	3.70	3.40	4.93	2.90	7.00	272
Production Coordinator	6.61	6.00	5.51	7.32	4.10	11.91	40
Spray Painter	4.49	4.50	3.45	5.10	2.90	7.38	69
Watchman or Guard	4.01	3.55	3.25	4.40	2.90	6.83	80
<b>PROFESSIONAL &amp; TECHNICAL</b>							
Accountant	6.93	6.77	5.75	8.31	3.80	10.58	33
Computer Operator	4.69	4.25	3.80	5.31	3.25	8.54	27
Drafter	5.23	5.43	4.50	6.00	3.25	7.04	35
Electronic Technician	6.11	6.30	5.20	7.28	3.60	7.88	28
Laboratory Tester	5.53	5.19	5.19	5.95	2.90	8.46	90
Programmer	7.53	7.72	6.52	8.65	4.18	12.69	19
<b>OFFICE WORKERS</b>							
Accounting Clerk	4.34	4.10	3.60	4.90	2.90	7.63	109
Administrative Clerk	4.10	3.80	3.40	4.45	2.90	8.48	230
Bookkeeper	4.18	3.82	3.45	4.83	2.90	7.81	64
Clerk-Typist	3.92	3.80	3.36	4.15	2.90	5.91	79
Data Entry Clerk	4.00	3.75	3.50	4.60	3.16	5.75	21
Inventory Control Clerk	4.59	4.50	3.90	5.12	3.00	7.29	31
Key Punch Operator	3.86	3.75	3.25	4.20	2.96	5.63	43
PBX Operator	3.99	3.80	3.00	4.62	2.90	6.30	30
Payroll Clerk	4.28	4.08	3.75	4.68	3.00	6.81	40
Receptionist	3.73	3.46	3.13	4.00	2.96	5.63	38
Secretary	4.52	4.35	3.80	5.08	3.10	7.24	146
Shipping & Receiving Clerk	4.43	4.06	3.30	5.08	2.90	8.06	79
Stock Clerk	5.13	5.08	4.38	5.35	3.25	7.90	52
Teller, Bank	3.63	3.60	3.25	3.95	2.90	5.20	113
<b>TOTAL</b>							6791

\*The middle range is defined by two rates of pay; one-fourth of the employees earn less than the low and one-fourth earn more than the high rates.

This survey represents responses from 121 Joplin area firms, in the counties of Jasper, Newton and McDonald. The firms surveyed were primarily ones with ten or more employees.

Additional wage breakdowns by manufacturing, non-manufacturing, or industry is available upon request. Sample page of Joplin Wage Survey

RESOURCE: St. Joseph Wage Survey

FORMAT OR DELIVERY MEDIUM: Printed pamphlet

GEOGRAPHIC COVERAGE: St. Joseph Metropolitan Area

RELEASE SCHEDULE: Published in December of even numbered years.

PRODUCING AGENCY: St. Joseph Job Service

AVAILABILITY: Available upon request from the St. Joseph Job Service, 301 S. Seventh St., St. Joseph, MO 64501 (816) 364-2961.

DATA ITEM: Employment by occupation; ranges of pay rates; distribution of workers in pay ranges; fringe benefits.

DESCRIPTION: The St. Joseph Job Service conducts their survey in even numbered years, and publishes the report in December of the reported year. The report provides wage information for 28 professional, semi-professional, and clerical occupations and 19 skilled and semi-skilled occupations. The survey reports the number of employees in each occupation, ranges of pay rates, the median and average rates for the occupations, and the distribution of workers in pay ranges. Definitions for the occupational titles used are included in the report. Data are also published for fringe benefits, including: Holidays, vacations, shift premiums, rest periods, dental care, vision care, and insurance.

RESOURCE: Starting Rate for an Experienced Worker in Selected Occupations

FORMAT OR DELIVERY MEDIUM: Printed Table

GEOGRAPHIC COVERAGE: Local Job Service Office Administrative Area

RELEASE SCHEDULE: Prepared Annually in April

PRODUCING AGENCY: Local Job Service Office

AVAILABILITY: Upon request from local Labor Market Analyst.

DATA ITEM: Hourly Wage Rate by Occupation.

DESCRIPTION: This report is prepared annually in April. It provides an estimated starting hourly wage rate for experienced workers in 31 occupations by Dictionary of Occupational Titles code. The wage rate estimates are based primarily on the wage rates for job openings listed at the pertinent local Job Service offices and the local analysts' judgment about other prevailing wages in the local area.

## STARTING RATE FOR AN EXPERIENCED WORKER IN SELECTED OCCUPATIONS

(Hourly Rate)

As of April, 1978

<u>Occupation Title</u>	<u>Code</u>	Cape Girardeau	Caruthersville	Chillicothe	Clinton	Columbi
Assembler, Production	706.887	3.50	3.03	3.75	2.85	3.75
Assembler, Electronics	Any Ind	3.00	NA	NA	NA	3.75
Inspector, General	609.684	3.00	3.03	3.85	2.85	3.50
Mach Set-up Operator	600.380	4.50	3.03	4.75	3.00	5.00
Machinist, Journeyman	600.280	4.90	4.50	4.50	4.25	5.50
Tool and Die Maker	601.280	5.25	NA	5.85	5.00	5.00
Maintenance Worker, Fac	899.281	6.00	3.50	4.50	3.55	4.50
Maintenance Mechanic	638.281	6.00	3.50	4.50	3.50	4.50
Drill Press Operator	606.782	4.00	3.03	4.50	2.85	4.35
Punch Press Operator	615.782	3.80	3.03	5.25	2.85	4.35
Prod Mach Opr (Gen Mfg)	609.885	4.20	3.03	4.75	3.00	4.00
Prod Mach Opr (Mach Shop)	609.885	4.20	NA	4.75	3.00	4.50
Sheet Metal Prod Wrkr	619.885	3.60	3.03	4.85	NA	4.50
Sheet Metal Wrkr	804.281	4.20	3.03	3.50	NA	4.75
Plastic Extruder Opr	557.782	3.65	NA	2.65	2.95	3.50
Sewing Mach Oprs	787.782	2.65	2.65	2.65	3.00	3.25
Polisher-Buffer	705.884	3.56	3.03	2.85	2.65	3.25
Electroplater	500.380	3.60	NA	NA	NA	3.50
Woodworking Mach Opr	669.782	4.50	NA	3.00	3.25	4.25
Miller, Wood	669.380	4.50	NA	NA	3.25	4.50
Material Handler	929.887	3.00	2.65	2.65	2.75	3.50
Packagers	920.885	3.00	NA	2.65	2.85	2.75
Painter, Spray	741.884	3.50	3.03	3.50	2.80	3.75
Welder, Arc	810.884	4.40	3.11	4.00	3.25	5.00
Welder, Acetylene	811.884	4.40	3.25	4.00	3.25	5.00
Welder, Combination	812.884	4.40	3.25	4.25	3.25	5.25
Welding Mach Opr, Arc	810.782	4.40	3.25	4.25	3.25	4.50
Plumber, Maintenance	862.381	5.00	4.00	4.40	4.00	5.50
Porter, Janitor, Cleaner	381.887	3.00	2.65	2.65	2.70	2.65
Guard	372.868	3.00	2.75	3.20	2.80	3.00
Carpenter, Maintenance	860.281	4.00	4.00	5.00	4.00	4.50
Draftsman, Engineering	007.281	5.00	NA	4.00	3.50	4.25
Electrical Repairer	829.281	6.00	NA	5.00	4.00	5.00
Electronic Tech	003.181	4.50	NA	4.00	NA	4.75
Laboratory Tester, Quality	029.281	4.33	NA	4.30	2.85	3.75
Programmer	020.188	5.29	NA	NA	NA	4.50
Bookkeeper	210.388	3.00	3.00	3.00	2.85	3.50
Accounting Clerk	219.488	3.00	2.65	2.85	2.75	3.00
Cashier	211.368	2.65	2.65	2.65	2.65	2.75
Clerk, General Office	219.388	3.00	2.65	3.00	2.65	3.25
File Clerk	206.388	2.75	2.65	2.65	2.65	2.75
Retail Sales Clerk	290 XXX	2.75	2.65	2.65	2.65	2.75
Clerk-Typist	209.388	2.75	2.65	2.65	2.65	3.00
Receptionist	237.368	2.80	2.65	2.65	2.85	2.80
Secretary	201.368	3.00	3.00	3.00	2.85	3.50
Key-Punch Operator	213.582	3.00	NA	2.85	2.85	3.00
Product Coordinator	221.168	2.56	3.00	NA	2.95	3.25
Ship & Rec Clerk	222.387	3.50	3.00	2.85	2.95	3.25
Stock Clerk	223.387	3.00	2.65	2.65	2.75	3.25

SECTION THREE

OTHER EMPLOYMENT DATA SOURCES

(NO OCCUPATIONAL DETAIL)

RESOURCE: County Business Patterns (CBP)

FORMAT OR RELIVERY MEDIUM: Printed Report

GEOGRAPHIC COVERAGE: Nation, States, and Counties

RELEASE SCHEDULE: Published Annually in May

PRODUCING AGENCY: Bureau of the Census

AVAILABILITY: Available in Missouri Resource Libraries  
and for sale by the Superintendent of Documents,  
U.S. Government Printing Office, Washington, DC 20402

DATA ITEM: Nonagricultural wage and salary employment,  
number of employees, total payroll, number of  
establishments by type of business, and employment-  
size.

DESCRIPTION: County Business Patterns reports establishment  
data for the United States, states and countries annually.  
The data is not available until one and one-half years after  
the reported year. The latest available issue is for 1977,  
issued May 1979. This publication provides summary data on:  
the number of employees for the mid-March pay period, first-  
quarter total payroll, total annual payroll, number of  
establishments in an area, and the number of establishments  
by employment-size class. Data that may disclose the  
operations of a single employer are not published. However,  
the number of establishments in a type of business and the  
distribution of firms by employment-size is not considered  
a disclosure and is reported even where items such as  
employment and payrolls are withheld. Data are not shown  
separately for any industry that does not have at least 50  
employees in the area covered, but are included in broader  
industry group totals.

The report includes those types of employment covered under the Federal Insurance Contribution Act (FICA): all covered wage and salary employment of private nonfarm employers and of nonprofit membership organizations under compulsory coverage; and all employees of charitable, educational, and other nonprofit organizations covered under the elective provisions of the act. Those individuals excluded are: government employees, self-employed persons, farm workers, domestic service workers, and employment subject to the Railroad Retirement Act.

Total annual payroll includes all forms of compensation which are subject to income tax withholding: salaries, wages, commissions, bonuses, vacation allowances, sick leave pay, and the value of payments in kind such as free meals and lodging. Payroll is reported before deductions such as income tax, insurance, and union dues.

The data is not subject to sampling error as County Business Patterns due to the fact that BLS's estimates are based on a household survey and CBP statistics are from establishment data. There are also differences between the two series in coverage and definitions. The user should also be aware of changes in methods of imputation before interpreting year-to-year changes.<sup>1</sup>

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<sup>1</sup>For example, prior to 1974, the observation unit for CBP data was the company. Employment for a multi-unit firm was assigned to the county from which Social Security reports were filed rather than the county in which employment was located. Since 1974, tabulations have been made on the establishment basis, covering employment by county in which employees work.

COUNTY BUSINESS PATTERNS

TABLE 1D. The State; Administrative and Auxiliary Units: 1973

(Excludes government employees, railroad employees, self employed persons, etc.—see "General Explanation." "D" denotes figures withheld to avoid disclosure of operations of individual reporting units)

SIC code	Major industry group	Number of employees, mar.-March pay period	Taxable payrolls, Jan.-Mar. (\$1,000)	Total reporting units
...	TOTAL.....	46 719	126 822	655
...	MINING.....	1 042	3 571	15
10	METAL MINING.....	176	513	3
12	BITUMINOUS COAL AND LIGNITE MINING.....	753	2 753	4
14	NONMETALLIC MINERALS, EXCEPT FUELS.....	103	274	6
...	CONTRACT CONSTRUCTION.....	655	3 193	23
15	GENERAL BUILDING CONTRACTORS.....	227	1 688	6
16	HEAVY CONSTRUCTION CONTRACTORS.....	269	1 043	11
17	SPECIAL TRADE CONTRACTORS.....	159	461	6
...	MANUFACTURING.....	27 357	80 018	280
20	FOOD AND KINDRED PRODUCTS.....	6 203	19 189	60
21	TOBACCO MANUFACTURES.....	54	146	5
22	TEXTILE MILL PRODUCTS.....	(D)	(D)	1
23	APPAREL AND OTHER TEXTILE PRODUCTS.....	1 965	3 495	22
24	LUMBER AND WOOD PRODUCTS.....	161	400	9
25	FURNITURE AND FIXTURES.....	206	695	5
26	PAPER AND ALLIED PRODUCTS.....	293	964	17
27	PRINTING AND PUBLISHING.....	243	738	14
28	CHEMICALS AND ALLIED PRODUCTS.....	6 215	21 646	30
29	PETROLEUM AND COAL PRODUCTS.....	164	473	8
30	RUBBER AND PLASTICS PRODUCTS, N.E.C.....	229	536	7
31	LEATHER AND LEATHER PRODUCTS.....	2 387	6 283	11
32	STONE, CLAY, AND GLASS PRODUCTS.....	362	1 195	12
33	PRIMARY METAL INDUSTRIES.....	210	832	9
34	FABRICATED METAL PRODUCTS.....	1 114	2 786	13
35	MACHINERY, EXCEPT ELECTRICAL.....	227	570	7
36	ELECTRICAL EQUIPMENT AND SUPPLIES.....	4 671	12 671	19
37	TRANSPORTATION EQUIPMENT.....	1 586	4 324	14
38	INSTRUMENTS AND RELATED PRODUCTS.....	817	2 419	12
39	MISCELLANEOUS MANUFACTURING INDUSTRIES.....	125	355	3
...	TRANSPORTATION AND OTHER PUBLIC UTILITIES.....	1 161	3 981	20
41	LOCAL AND INTERURBAN PASSENGER TRANSIT.....	(D)	(D)	2
42	TRUCKING AND WAREHOUSING.....	457	1 653	9
44	WATER TRANSPORTATION.....	(D)	(D)	2
48	COMMUNICATION.....	241	804	4
49	ELECTRIC, GAS AND SANITARY SERVICE.....	(D)	(D)	2
...	WHOLESALE TRADE.....	5 388	12 473	99
52	RETAIL TRADE.....	10 191	21 491	156
53	BUILDING MATERIALS AND FARM EQUIPMENT.....	419	700	11
54	GENERAL MERCHANDISE.....	1 568	3 227	22
55	FOOD STORES.....	2 302	5 405	25
56	AUTOMOTIVE DEALERS AND LIQUOR STATIONS.....	1 198	2 688	21
57	APARTMENT AND ACCESSORY STORES.....	2 571	5 722	19
58	FURNITURE AND HOME FURNISHING STORES.....	426	933	7
59	EATING AND DRINKING PLACES.....	426	806	24
...	MISCELLANEOUS RETAIL STORES.....	1 281	2 008	27
...	FINANCE, INSURANCE, AND REAL ESTATE.....	331	783	6
61	CREDIT AGENCIES OTHER THAN BANKS.....	164	386	3
63	INSURANCE CARRIERS.....	167	397	3
...	SERVICES.....	594	1 312	56
72	JOURNAL SERVICES.....	54	53	6
73	MISCELLANEOUS BUSINESS SERVICES.....	204	386	32
78	MOTION PICTURES.....	175	448	6
H9	MISCELLANEOUS SERVICES.....	(D)	(D)	1

Sample Page

County Business Patterns

RESOURCE: Current Employment Statistics (CES) Program  
(BLS 790)

FORMAT OR DELIVERY MEDIUM: Data is used in conjunction with other data series and is published in various series such as Employment and Earnings

GEOGRAPHIC COVERAGE: Nation, States, and SMSAs

PRODUCING AGENCY: Bureau of Labor Statistics

AVAILABILITY: CES data is available in the next two publications, Missouri Area Labor Trends and Employment and Earnings.

DATA ITEM: Nonagricultural wage and salary employment by industrial classification, average weekly hours, earnings, and labor turnover.

DESCRIPTION: The Current Employment Statistics program is a federal-state project operated by state Employment Security agencies, the Bureau of Labor Statistics, the Employment and Training Administration, and the U.S. Department of Labor. The state agencies collect and tabulate data each month on employment, hours, and earnings from payroll records of a representative sample of industrial, commercial, and government establishments. No occupational detail is provided, only employment by industry. The data are then sent to the Bureau of Labor Statistics for the preparation of the national series. Employment is reported by place of work and records are voluntarily submitted to state agencies. The data collected includes information by industry on nonagricultural wage and salary employment, average weekly hours, average hourly and weekly earnings, and labor turnover.

Forms BLS 790 is used to collect data on employment and hours for full and part-time production or related workers and nonsupervisory workers. This information is derived from the payrolls of nonagricultural establishments employing over 30 million workers for the pay period including the 12th of each month. For Federal government establishments, employment figures represent the number of persons employed on the last day of the month. Establishments are classified into industries on the basis of their principal product or activity as determined from information on their annual sales volume. All employees of establishments engaged in more than one activity or producing more than one product are included under the principal product's or activity's industrial classification in accordance with the 1972 Standard Industrial Classification Manual.

Persons who receive pay for any part of the pay period, including those who receive pay for vacations, holidays, sick leave, etc., are counted as employed. Persons who are laid off, on leave without pay, or on strike for the entire period or who are hired but have not been paid during the period are not counted as employed. Average hourly earnings are on a "gross" basis and reflect not only changes in basic hourly wages but also variable factors such as premium pay for overtime, late-shift work differentials, and changes in output of workers paid on a piece-rate basis. The category "hours" covers the hours paid for including holidays, sick leave, and vacation. This may not be

representative of hours actually worked. Proprietors, self-employed, domestic workers in private homes, and unpaid family workers are excluded.

Data are collected for a smaller sample of establishments on Form DL 1219 on labor turnover. Accessions, broken out into new hires and recalls, and separations, broken out into quits and layoffs, are cumulated for the month and expressed as a rate per 100 employees. This rate refers to all employees, whether full or part-time; permanent or temporary and includes transfers to another establishment of the company.

Which establishments are to be sampled is determined by experience and cost considerations. Large establishments fall into the sample with certainty. Smaller establishments are sampled on the basis of industry structure. For example, if an industry is comprised primarily of small firms, then a greater proportion of them will be sampled than is normally the case. The number of firms sampled depends upon the degree of fluctuation of the industry and homogeneity of staffing patterns.

Industries are stratified by size of establishment and/or region. The stratified worker-data is used to weight the hours and earnings into broad industry groupings. Employment estimates are compared periodically with comprehensive counts of employment, which provide benchmarks for the various industries. The benchmark is used to establish the level of employment; the sample is used to measure the month-to-month changes. The primary source of

benchmark data is payroll records of establishments covered under state unemployment insurance laws. These are supplemented by records from various government agencies such as the Social Security Administration.

Civilian labor force and unemployment rate statistics as well as the major unemployment and employment estimates are computed by aggregating and adjusting independent series. The Current Employment Statistics program plays a major role in most of the labor force related estimates that are published, but the data from CES cannot be found unadjusted to other series in published sources. For example, the data presented in Employment and Earnings is derived primarily from data from the CES program but is adjusted to information from employers reporting under state unemployment insurance laws, and records from the Social Security Agency as well as a number of other government and private industry agencies.

**ESTABLISHMENT DATA  
STATE AND AREA LABOR TURNOVER**

**D-4. Labor turnover rates in manufacturing for selected States and areas—Continued**

[ Per 100 employees ]

State and area	Accession rates						Separation rates					
	Total		New hires		Recalls		Total		Quits		Layoffs	
	Dec. 1977	Jan. 1978	Dec. 1977	Jan. 1978	Dec. 1977	Jan. 1978	Dec. 1977	Jan. 1978	Dec. 1977	Jan. 1978	Dec. 1977	Jan. 1978
MINNESOTA <sup>1</sup>	2.3	3.8	1.7	2.6	0.4	1.0	3.3	3.2	1.1	1.4	1.6	1.1
Minneapolis-St. Paul <sup>1</sup>	2.0	3.3	1.5	2.4	.3	.8	2.3	2.7	1.0	1.2	.9	.3
MISSISSIPPI:												
Jackson <sup>1</sup>	2.8	3.1	2.5	2.2	.2	.6	3.1	4.0	1.7	1.8	1.0	1.6
MISSOURI <sup>1</sup>	2.3	3.3	1.5	2.2	.6	.8	3.0	3.3	1.1	1.5	1.2	1.2
Kansas City <sup>1</sup>	1.8	3.3	1.4	2.7	.3	.4	2.3	3.4	1.0	1.3	.7	1.3
St. Louis <sup>1</sup>	1.5	2.3	.9	1.5	.4	.6	3.3	2.6	.6	.9	2.0	1.0
MONTANA	2.1	2.4	1.7	1.3	(*)	(*)	1.9	3.5	1.0	1.4	.5	1.2
NEBRASKA <sup>1</sup>	3.7	4.1	3.3	3.1	.3	.9	3.5	3.7	1.9	2.2	1.0	.7
NEVADA	6.3	8.8	4.5	6.8	.8	1.1	6.0	7.7	3.5	3.9	.3	1.2
NEW HAMPSHIRE <sup>1</sup>	2.6	4.4	2.2	3.5	.2	.3	3.1	3.8	1.7	2.1	.6	.5
NEW JERSEY:												
Camden <sup>9</sup>	1.8	3.3	.8	1.8	.7	.9	2.6	2.7	.5	.8	1.4	.3
Hackensack	2.2	3.8	1.6	2.3	.6	1.4	3.1	3.7	1.0	1.3	1.3	1.5
Jersey City	2.5	3.4	1.8	1.9	.6	1.4	7.1	4.1	.8	.9	5.2	2.3
Newark	2.0	2.8	1.4	1.8	.5	.5	2.3	3.1	.7	1.0	.9	1.3
New Brunswick-Perth Amboy-Sayreville	2.2	3.9	1.7	2.2	.4	1.1	3.8	2.8	1.0	1.1	1.9	.5
Paterson-Clifton-Passaic	1.7	3.9	1.4	2.5	.2	1.1	4.6	4.5	1.1	1.2	2.8	2.4
Trenton	2.4	3.6	1.0	1.3	1.2	1.6	4.6	2.8	.8	.7	2.9	1.3
NEW YORK <sup>1</sup>	2.2	3.5	1.3	1.9	.7	1.3	4.0	3.9	.8	1.0	2.5	2.0
Albany-Schenectady-Troy <sup>1</sup>	1.4	2.6	.7	1.2	.4	.6	2.3	3.0	.6	.8	1.0	1.0
Binghamton <sup>1</sup>	1.9	2.0	1.4	1.5	.1	.4	1.8	2.3	.7	1.1	.6	.4
Buffalo <sup>1</sup>	1.6	2.4	.6	.9	.8	1.1	2.6	2.8	.4	.5	1.3	1.4
Elmira <sup>1</sup>	1.7	2.3	1.2	1.2	.3	.5	1.8	3.1	.4	.7	.9	1.3
Monroe County <sup>1 10</sup>	1.0	1.1	.7	.8	.2	.1	1.3	1.5	.4	.7	.4	.3
Nassau-Suffolk <sup>1 11</sup>	3.1	4.5	2.6	3.6	.4	.7	5.6	5.2	1.8	2.0	2.6	2.2
New York and Nassau-Suffolk <sup>1</sup>	2.9	4.7	1.7	2.6	1.2	1.9	5.3	5.5	1.1	1.3	3.5	3.4
New York SMSA <sup>1 11</sup>	2.9	4.7	1.4	2.4	1.4	2.1	5.2	5.6	.9	1.1	3.7	3.7
New York City <sup>1 12</sup>	3.1	5.0	1.5	2.5	1.5	2.4	5.7	6.2	.9	1.2	4.2	4.2
Rochester <sup>1</sup>	1.3	1.5	.8	1.0	.3	.3	2.3	2.2	.5	.7	1.3	.9
Syracuse <sup>1</sup>	1.2	1.9	.8	1.2	.3	.5	2.3	2.2	.5	.7	1.3	.8
Utica-Rome <sup>1</sup>	1.8	3.1	1.1	1.9	.6	1.0	1.8	2.3	.6	.8	.7	1.0
Westchester County <sup>1 12</sup>	1.6	2.6	1.2	1.7	.2	.7	2.1	1.8	.7	.7	.9	.5
NORTH CAROLINA <sup>1</sup>	2.1	4.2	1.7	3.5	.2	.3	3.0	4.1	1.7	2.6	.7	.7
Charlotte-Gastonia <sup>1</sup>	2.6	5.1	2.3	4.2	.1	.5	3.7	4.9	2.1	3.3	1.0	.5
Greensboro-Winston-Salem-High Point <sup>1</sup>	2.2	4.0	1.8	3.3	.1	.2	2.7	3.7	1.6	2.3	.6	.0
NORTH DAKOTA <sup>1</sup>	3.3	4.2	2.4	2.7	.5	1.2	5.9	4.1	1.8	1.7	3.3	1.5
Fargo-Moorhead <sup>1</sup>	4.0	3.3	2.7	3.2	.2	(*)	8.8	8.4	1.4	1.5	6.4	5.8
OHIO <sup>1</sup>	1.5	2.5	.8	1.3	(*)	(*)	2.0	2.8	.6	.8	.8	1.3
Akron <sup>1</sup>	1.0	1.7	.6	.9	(*)	(*)	1.6	1.4	.5	.6	.7	.3
Canton <sup>1</sup>	1.8	2.6	.7	1.0	(*)	(*)	2.2	3.3	.5	.7	.7	1.5
Cincinnati <sup>1</sup>	1.6	2.1	1.0	1.6	(*)	(*)	1.7	2.1	.7	.8	.6	.9
Cleveland <sup>1</sup>	1.5	2.2	1.0	1.4	(*)	(*)	1.8	2.6	.7	.8	.5	1.5
Columbus <sup>1</sup>	1.5	2.3	1.0	1.2	(*)	(*)	1.8	3.0	.6	.8	.5	.8
Dayton <sup>1</sup>	1.0	1.6	.7	1.2	(*)	(*)	1.5	2.1	.5	.6	.4	1.1
Toledo <sup>1</sup>	1.5	1.9	.6	1.3	(*)	(*)	1.6	2.5	.4	.7	.6	1.1
Youngstown-Warren <sup>1</sup>	1.3	2.6	.2	.5	(*)	(*)	2.4	4.7	.2	.3	1.5	3.3
OKLAHOMA <sup>1</sup>	3.7	5.5	3.3	4.9	.3	.5	3.9	4.8	2.7	3.3	.4	.5
Oklahoma City <sup>1</sup>	3.6	5.5	3.0	4.9	.5	.5	3.7	4.9	2.5	3.6	.5	.8
Tulsa <sup>1 13</sup>	3.9	5.1	3.5	4.8	.3	.3	3.9	5.1	2.6	3.0	.4	.0
OREGON <sup>1 14</sup>	3.3	4.6	2.6	3.6	.6	.7	3.7	3.9	1.6	1.9	1.4	1.1
Portland <sup>1 14</sup>	3.5	4.9	2.8	3.9	.6	.8	3.3	3.9	1.5	2.0	1.1	1.1
PENNSYLVANIA <sup>1</sup>	2.1	3.5	1.0	1.5	.9	1.7	3.4	3.2	.6	.8	2.2	1.6
Allentown-Bethlehem-Easton <sup>1</sup>	1.3	3.4	.6	1.0	.6	2.0	3.2	2.9	.6	.8	2.2	1.3
Altoona <sup>1</sup>	2.6	3.4	1.0	.7	1.6	2.6	3.0	5.8	1.0	.8	1.7	4.4
Erie <sup>1</sup>	2.0	2.2	1.1	1.4	.7	.5	2.0	2.7	.5	.8	.9	.5
Harrisburg <sup>1</sup>	1.9	2.3	1.1	1.4	.7	.8	3.4	2.0	1.0	.9	1.8	4.8
Johnstown <sup>1</sup>	3.5	3.5	1.1	.6	2.3	2.8	4.2	7.5	.7	1.0	3.3	.7
Lancaster <sup>1</sup>	1.8	4.1	1.5	3.0	.2	1.1	5.2	2.9	1.0	1.4	3.7	.7

See footnotes at end of table.

Sample page of Employment and Earnings

# STATE AND AREA UNEMPLOYMENT DATA

## E-1. Labor force and unemployment by State and selected metropolitan areas—Continued

(Numbers in thousands)

State and area	Unemployment								
	Labor force			Number		Percent of labor force			
	FFB. 1977R	JAN. 1978R	FEB. 1978P	FEH. 1977R	JAN. 1978R	FER. 1978P	FEB. 1977R	JAN. 1978R	FEB. 1978P
<b>MICHIGAN—Continued</b>									
Grand Rapids .....	278.7	283.0	285.1	21.2	17.0	14.5	7.0	6.0	5.1
Jackson .....	65.4	65.6	64.7	6.9	4.7	3.9	10.3	7.7	6.0
Kalamazoo—Portage .....	130.2	128.3	130.6	10.1	9.0	7.1	7.5	7.0	5.4
Lansing—East Lansing .....	220.5	224.1	226.0	17.9	15.6	13.4	8.1	7.1	5.9
Muskegon—Norton Shores—Muskegon Heights .....	75.1	75.8	75.7	7.9	7.5	6.9	10.3	10.0	9.1
Saginaw .....	97.2	102.4	102.6	7.6	6.4	5.3	7.1	6.7	5.2
<b>MINNESOTA</b>									
Duluth—Superior .....	1,431.5	1,900.1	1,904.9	122.7	99.7	94.3	6.1	5.2	5.0
Minneapolis—St. Paul .....	112.3	N.A.	N.A.	10.9	N.A.	N.A.	9.7	N.A.	N.A.
St. Paul .....	477.8	1,025.1	1,019.2	49.2	38.6	35.8	5.4	3.8	3.5
<b>MISSISSIPPI</b>									
Jackson .....	926.4	960.8	967.8	73.8	76.2	73.2	8.1	7.9	7.6
St. Louis .....	131.5	137.7	139.6	8.2	8.5	7.8	6.2	6.1	5.6
<b>MISSOURI</b>									
Kansas City <sup>1</sup> .....	2,170.5	2,216.2	2,205.3	153.1	153.6	150.2	7.1	6.9	6.8
St. Joseph .....	637.0	655.3	651.5	40.8	35.8	33.5	6.4	5.5	5.1
St. Louis <sup>1</sup> .....	44.4	45.6	45.5	3.5	3.1	2.9	7.4	6.7	6.5
Springfield .....	1,041.6	N.A.	N.A.	80.5	N.A.	N.A.	7.7	N.A.	N.A.
Billing .....	95.6	97.6	97.5	5.1	5.5	5.3	5.4	5.7	5.4
<b>MONTANA</b>									
Billings .....	320.3	N.A.	N.A.	25.4	N.A.	N.A.	7.2	N.A.	N.A.
Great Falls .....	48.8	N.A.	N.A.	2.8	N.A.	N.A.	5.3	N.A.	N.A.
Great Falls .....	33.3	N.A.	N.A.	2.5	N.A.	N.A.	7.3	N.A.	N.A.
<b>NEBRASKA</b>									
Lincoln .....	714.1	735.1	733.2	30.4	33.8	33.1	4.3	4.6	4.5
Omaha <sup>1</sup> .....	100.9	103.6	104.5	3.1	4.0	4.0	3.1	3.0	3.8
Omaha <sup>1</sup> .....	261.4	269.1	267.5	14.7	11.9	11.5	5.5	4.4	4.3
<b>NEVADA</b>									
Las Vegas .....	308.0	320.6	323.4	26.5	21.0	19.1	8.3	6.6	5.9
Reno .....	169.2	173.5	174.7	15.3	11.8	10.9	9.0	6.9	6.3
Reno .....	85.8	92.0	93.0	6.3	5.1	4.4	7.3	5.9	4.7
<b>NEW HAMPSHIRE</b>									
Manchester .....	385.2	397.4	400.3	27.2	20.4	20.1	7.0	5.1	5.0
Manchester .....	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.
<b>NEW JERSEY<sup>2</sup></b>									
Atlantic City .....	3,317.3	3,360.2	3,326.1	382.2	263.1	276.8	11.3	7.9	8.3
Jersey City .....	78.8	78.1	77.3	13.9	9.4	11.1	17.0	12.1	14.3
Long Branch—Asbury Park .....	264.7	254.5	252.8	42.3	28.9	28.4	16.0	11.4	11.2
Newark .....	210.3	214.2	211.8	23.9	17.0	17.9	11.4	7.9	8.5
New Brunswick—Perth Amboy—Sayreville .....	926.1	948.0	936.6	98.8	66.5	72.9	10.7	7.0	7.8
Paterson—Clifton—Passaic .....	294.8	311.1	306.5	31.6	20.6	21.7	10.7	6.6	7.1
Trenton .....	212.4	210.6	209.1	28.3	19.3	20.5	13.3	9.1	9.8
Vineland—Millville—Bridgeton .....	153.9	157.8	156.8	11.0	9.3	9.2	7.1	5.9	5.9
58.2	60.1	59.5	9.8	6.3	6.1	16.4	10.4	10.3	
<b>NEW MEXICO</b>									
Albuquerque .....	478.6	495.5	501.4	45.3	35.1	32.6	9.3	7.1	6.5
Albuquerque .....	178.3	184.2	186.4	17.3	12.5	11.2	9.7	6.8	6.0
<b>NEW YORK<sup>2</sup></b>									
Albany—Schenectady—Troy .....	7,680.9	7,789.1	7,743.4	810.9	682.4	688.1	10.0	8.8	8.9
Binghamton <sup>1</sup> .....	349.2	361.4	358.2	32.2	22.5	24.8	9.4	6.2	6.9
Buffalo .....	128.4	135.0	133.3	11.3	10.1	10.5	8.3	7.5	7.9
Elmira .....	549.5	564.4	554.9	68.8	48.7	48.9	12.3	8.6	8.8
Nassau—Suffolk .....	39.6	40.3	39.9	4.9	3.3	3.7	12.5	8.2	9.2
New York .....	1,171.6	1,232.0	1,204.3	125.1	87.6	94.2	10.7	7.1	7.8
New York City <sup>2</sup> .....	3,654.4	3,627.3	3,639.0	362.9	361.4	346.2	9.9	10.0	9.5
Poughkeepsie .....	3,117.0	3,054.0	3,080.0	319.0	322.0	301.0	10.2	10.5	9.8
Rochester .....	93.9	97.9	97.6	6.8	5.4	5.7	7.3	5.6	5.9
Syracuse .....	439.7	452.6	448.3	39.0	29.7	32.5	8.9	6.6	7.3
Utica—Rome .....	279.0	291.9	290.1	28.4	20.4	22.4	10.4	7.0	7.7
133.8	135.0	133.6	16.8	10.9	11.5	12.3	8.0	8.6	
<b>NORTH CAROLINA</b>									
Asheville .....	2,542.1	2,652.7	2,622.2	175.3	191.0	143.3	6.9	7.2	5.5
Charlotte—Gastonia .....	77.3	80.9	80.4	5.8	5.6	4.5	7.5	6.9	5.5
Greensboro—Winston-Salem—High Point .....	311.1	327.8	323.5	15.6	16.9	11.3	5.0	5.2	3.5
Raleigh—Durham .....	394.9	407.8	405.2	23.8	23.2	19.2	6.0	5.7	4.7
252.3	265.8	265.0	10.7	12.5	9.3	4.3	4.7	3.5	
<b>NORTH DAKOTA</b>									
Fargo—Moorehead .....	269.0	274.1	278.1	16.2	17.5	16.0	6.0	6.4	5.8
Fargo—Moorehead .....	64.5	68.9	65.6	2.8	3.6	3.0	4.3	5.3	4.3

See footnotes at end of table.

Sample page of Employment and Earnings

RESOURCE: Missouri Area Labor Trends

FORMAT OR DELIVERY MEDIUM: Printed Publication

GEOGRAPHIC COVERAGE: States, SMSAs, Joplin, and Counties

RELEASE SCHEDULE: Published Monthly

PRODUCING AGENCY: Missouri Division of Employment Security

AVAILABILITY: Available on a subscription basis, contact local Labor Market Analyst.

DATA ITEMS: Employment and average earnings by industry; unemployment and unemployment insurance claims, turnover rates.

DESCRIPTION: Published monthly by Missouri Division of Employment Security, Missouri Area Labor Trends provides a summary of a variety of data sources in a concise, readable format. This publication reports and analyzes information relevant to the current labor force such as turnover rates, employment, and unemployment trends. The information is published one and one half months following the reported month. Contents include:

- Labor Area Summary: A general description and analysis of the past month's economic conditions and changes in employment and unemployment for Missouri, SMSAS (St. Louis, Kansas City, St. Joseph, Springfield, Columbia) and Joplin.
- Nonagricultural Wage and Salary Employment: Presnets employment and wage data by industry at the Standard Industrial Classification 2 digit level of detail. Data is presented for the current month, previous month, and period 12 months previous.
- Production Worker Average Hours and Earnings in Manufacturing: A compilation of average weekly earnings, hours, and hourly earnings for broad industry categories for the state, SMSA's, and Joplin. Data is presented for current month, previous month, and period 12 months previous.

- Civilian Labor Force, Total Employment and Unemployment: Current employment and unemployment data for each county, with data for previous month, and period 12 months prior for the state and SMSAs.
- Selected Economic Statistics Related to Manpower Developments: Limited employment data, unemployment insurance claims, and Job Service placements for the state.

Most of the data is compiled from the Current Employment Statistics program, a cooperative effort between the Bureau of Labor Statistics and the Missouri Division of Employment Security where MDES data on payroll employment, hours, and earnings from a sample of industries. Bureau of Labor Statistics analyzes the data. Unemployment and employment figures are derived primarily from reports of employers reporting under state Unemployment Insurance laws and are supplemented by a series of estimates to account for workers not covered by the Unemployment Insurance system.<sup>1</sup> The figures are then adjusted to take into account data from the Current Population Survey.<sup>2</sup>

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<sup>1</sup>For further information, see Handbook on Estimating Unemployment (Washington, U.S. Dept. of Labor, Bureau of Employment Security, 1960).

<sup>2</sup>UI data are subject to sampling error from the Current Population Survey as well as inaccuracies arising out of the estimating technique itself. Not all unemployed persons are covered under laws due to eligibility requirements, disqualification, duration, waiting periods, etcetera.

The limitations of the information in Missouri Area Labor Trends are that of the data sources used to develop the report. The unemployment data are subject to sampling error from the Current Population Survey as well as inaccuracies arising out of the estimating technique for unemployment itself. Not all unemployed persons are covered under UI laws due to eligibility requirements, disqualification, duration of benefits, waiting periods, etcetera. The figures derived from the Current Employment Statistics program are also subject to sampling error.

TABLE 2. PRODUCTION WORKER AVERAGE HOURS AND  
EARNINGS IN MANUFACTURING  
KANSAS CITY, MISSOURI-KANSAS AREA

Major Industry Group	Average Weekly Earnings			Average Weekly Hours			Average Hourly Earnings		
	Dec. 1977 1/	Nov. 1977 2/	Dec. 1976	Dec. 1977 1/	Nov. 1977 2/	Dec. 1976	Dec. 1977 1/	Nov. 1977 2/	Dec. 1976
TOTAL MANUFACTURING . . . . .	\$276.89	\$279.64	\$253.54	41.7	41.8	41.7	\$6.64	\$6.69	\$6.08
DURABLE GOODS . . . . .	298.05	301.61	271.36	42.7	42.6	42.4	6.98	7.08	6.40
Lumber & Furniture . . . . .	211.99	206.78	182.03	43.0	42.2	39.4	4.93	4.90	4.62
Stone, Clay & Glass Products . . . . .	316.13	301.46	271.32	44.4	42.4	42.0	7.12	7.11	6.46
Primary Metal Industries . . . . .	334.38	348.52	292.40	39.2	37.8	35.4	8.53	9.22	8.26
Fabricated Metal Products . . . . .	236.40	235.91	220.66	40.9	41.1	41.4	5.78	5.74	5.33
Machinery Except Electrical . . . . .	297.48	277.97	263.13	44.4	41.8	41.7	6.70	6.65	6.31
Electrical Equip. & Supplies . . . . .	262.06	269.66	250.81	41.4	42.4	42.8	6.33	6.36	5.86
Transportation Equipment . . . . .	377.66	394.74	356.05	44.8	45.9	46.3	8.43	8.60	7.69
Motor Vehicles and Equipment . . . . .	(380.30)	(397.44)	(359.91)	(44.9)	(46.0)	(46.5)	(8.47)	(8.64)	(7.74)
Other Durable Goods . . . . .	170.93	169.92	165.00	40.6	39.7	42.2	4.21	4.28	3.91
NONDURABLE GOODS . . . . .	237.80	238.58	224.37	39.9	40.3	40.5	5.96	5.92	5.54
Food & Kindred Products . . . . .	280.32	296.88	262.85	43.8	46.1	44.4	6.40	6.44	5.92
Apparel and Other Textile Prod. . . . .	137.45	131.38	133.04	33.2	32.2	34.2	4.14	4.08	3.89
Paper & Allied Products . . . . .	209.72	212.63	203.86	40.1	40.5	41.1	5.23	5.25	4.96
Printing & Publishing* . . . . .	256.66	243.09	243.36	37.8	37.0	39.0	6.79	6.57	6.24
Chemicals & Allied Products . . . . .	287.12	282.15	274.99	42.1	41.8	42.9	6.82	6.75	6.41
Petroleum & Coal Products . . . . .	296.23	298.91	288.74	41.9	42.1	42.4	7.07	7.10	6.81
Other Nondurable Goods . . . . .	174.72	172.55	154.80	39.8	40.6	38.7	4.39	4.25	4.00

\* This series excludes industry 2771. 1/ Preliminary estimates. 2/ Revised  
Prepared in cooperation with the U. S. Department of Labor, Bureau of Labor Statistics.

TABLE 3. EMPLOYEE TURNOVER RATES 1/ IN MANUFACTURING  
BY SELECTED INDUSTRIES  
KANSAS CITY METROPOLITAN AREA – NOVEMBER, 1977

Industry	Accessions Per 100 Employees			Separations Per 100 Employees		
	Total	New Hires	Recalls	Total	Quits	Layoffs
	I	II	III	IV	V	VII
MANUFACTURING – TOTAL . . . . .	2.6	1.9	.6	2.7	1.3	.7
DURABLE GOODS . . . . .	1.9	1.5	.2	2.5	1.1	.6
Lumber & Fixtures . . . . .	4.7	4.3	.3	6.1	3.3	1.1
Stone, Clay & Glass Products . . . . .	1.5	1.1	.4	2.4	.6	.3
Primary Metal Industries . . . . .	2.2	1.4	.6	2.5	1.0	.9
Fabricated Metal Products . . . . .	1.4	1.3	.1	4.2	.9	2.4
Machinery, Exc. Electrical . . . . .	2.5	2.0	.4	2.3	1.1	.8
Electrical Equip. & Supplies . . . . .	2.1	1.7	.2	1.6	1.1	*
Transportation Equipment . . . . .	.7	.4	.1	1.7	.7	.1
Other Durable Goods . . . . .	3.4	3.4	*	4.0	3.6	*
2. NONDURABLE GOODS . . . . .	3.8	2.5	1.1	3.2	1.6	.8
Food & Kindred Products . . . . .	3.2	2.2	.8	5.1	1.8	2.4
Apparel & Other Textile Prod. . . . .	1.7	1.3	.4	2.8	1.8	.1
Paper & Allied Products . . . . .	3.5	2.6	.7	2.7	1.3	.1
Printing & Publishing . . . . .	5.8	3.0	2.8	2.2	1.1	.3
Chemicals & Allied Products . . . . .	2.1	1.9	.1	1.2	.6	*
Petroleum & Coal Products . . . . .	1.4	1.2	*	1.1	.4	*
Other Nondurable Goods . . . . .	4.7	4.5	.1	7.1	5.0	1.3

1/ Prepared in cooperation with the U. S. Bureau of Labor Statistics.  
Monthly Employee Turnover Rates computed as a percent of employment during the payroll period which includes the 12th day of the month.

TABLE I-A  
AUGUST 1979 (PRELIM.)

Other Areas (Counties)	Civilian Labor Force	Total Employment	Total Unemployment	
			Number	Rate
Adair/Schuylerville LMA	15,132	14,818	314	2.1
Atchison	4,345	4,269	76	1.7
Audrain	11,947	11,584	363	3.0
Barry	10,389	9,792	597	5.7
Barton	4,574	4,479	95	2.1
Bates	6,685	6,469	216	3.2
Benton	4,911	4,750	161	3.3
Bollinger	2,873	2,689	184	6.4
Butler	15,696	14,812	884	5.6
Caldwell	3,564	3,450	114	3.2
Callaway	21,561	20,961	600	2.8
Camden	11,338	11,033	305	2.7
Cape Girardeau	30,041	29,062	979	3.3
Carroll	4,813	4,674	139	2.9
Carter	2,152	2,017	135	6.3
Cedar	4,027	3,859	168	4.2
Chariton	4,394	4,202	192	4.4
Clark	3,049	2,865	184	6.0
Clinton	7,849	7,596	253	3.2
Cole/Osage LMA	35,509	34,297	1,212	3.4
Cooper	6,118	5,926	192	3.1
Crawford	7,769	7,284	485	6.2
Dade	3,283	3,207	76	2.3
Dallas	5,517	5,286	231	4.2
Daviess	2,976	2,876	100	3.4
DeKalb	3,102	3,008	94	3.0
Dent	6,024	5,792	232	3.9
Douglas	4,625	4,293	332	7.2
Dunklin	13,213	12,304	909	6.9
Gasconade	6,061	5,676	385	6.4
Gentry	4,027	3,922	105	2.6
Grundy	5,571	5,426	145	2.6
Harrison	4,396	4,291	105	2.4
Henry	9,676	9,372	304	3.1
Hickory	2,502	2,397	105	4.2
Holt	3,322	3,260	62	1.9
Howard	4,520	4,371	149	3.3
Howell	11,632	11,002	630	5.4
Iron	4,909	4,600	309	6.3
Jasper/Newton LMA	57,573	55,385	2,188	3.8
Johnson	14,265	13,715	550	3.9
Knox	2,288	2,223	65	2.8
Laclede	10,105	9,584	521	5.2
Lafayette	14,644	14,146	498	3.4
Lawrence	11,432	10,973	459	4.0
Lewis	4,713	4,586	127	2.7
Lincoln	8,471	8,059	412	4.9
Linn	7,753	7,314	439	5.7
Livingston	7,003	6,810	193	2.8
McDonald	5,151	4,911	240	4.7
Macon	6,475	6,208	267	4.1

Continued on Page 4

Sample page from Missouri Area Labor Trends

Continued from Page 3

Other Areas (Counties)	Civilian Labor Force	Total Employment	Total Unemployment	
			Number	Rate
Madison . . . . .	3,858	3,607	251	6.5
Maries . . . . .	2,570	2,405	165	6.4
Marion/Ralls LMA .	18,166	17,503	663	3.6
Mercer . . . . .	1,753	1,717	36	2.1
Miller . . . . .	10,393	10,037	356	3.4
Mississippi . . . . .	5,598	5,244	354	6.3
Moniteau . . . . .	4,202	3,978	224	5.3
Monroe . . . . .	4,707	4,565	142	3.0
Montgomery . . . . .	4,803	4,622	181	3.8
Morgan . . . . .	5,286	5,015	271	5.1
New Madrid . . . . .	10,116	9,504	612	6.0
Nodaway . . . . .	10,126	9,942	184	1.8
Oregon . . . . .	2,719	2,535	184	6.8
Ozark . . . . .	3,846	3,686	160	4.2
Pemiscot . . . . .	8,773	8,264	509	5.8
Perry . . . . .	7,561	7,204	357	4.7
Pettis . . . . .	17,025	16,268	757	4.4
Phelps . . . . .	14,466	13,786	680	4.7
Pike . . . . .	6,307	6,036	271	4.3
Polk . . . . .	8,230	7,887	343	4.2
Pulaski . . . . .	8,226	7,788	438	5.3
Putnam . . . . .	3,141	3,063	78	2.5
Randolph . . . . .	10,825	10,397	428	4.0
Reynolds . . . . .	2,687	2,545	142	5.3
Ripley . . . . .	3,374	3,149	225	6.7
St. Clair . . . . .	3,641	3,538	103	2.8
Ste. Genevieve . . . . .	7,133	6,811	322	4.5
St. Francois . . . . .	18,270	16,995	1,275	7.0
Saline . . . . .	13,789	13,500	289	2.1
Scotland . . . . .	2,558	2,494	64	2.5
Scott . . . . .	21,061	19,833	1,228	5.8
Shannon . . . . .	2,486	2,175	311	12.5
Shelby . . . . .	3,283	3,119	164	5.0
Stoddard . . . . .	13,135	12,414	721	5.5
Stone . . . . .	7,148	6,913	235	3.3
Sullivan . . . . .	3,127	3,075	52	1.7
Taney . . . . .	13,562	13,171	391	2.9
Texas . . . . .	6,324	5,840	484	7.7
Vernon . . . . .	9,632	9,414	218	2.3
Warren . . . . .	4,735	4,495	240	5.1
Washington . . . . .	4,288	3,586	702	16.4
Wayne . . . . .	3,861	3,582	279	7.2
Webster . . . . .	6,340	5,944	396	6.2
Worth . . . . .	1,192	1,161	31	2.6
Wright . . . . .	7,121	6,767	354	5.0

Continued from Page 2

ment insurance should fall in September, with the beginning of the new school year. Thus, total unemployment should decrease a little in September. Seasonal increases should occur thereafter, but much remains to be determined by economic developments.

Preliminary government figures are reported to show that the economy has grown slowly in the current quarter, following the

sharp decline of the second quarter. If subsequent data confirm this, the most commonly accepted definition of a recession (two consecutive quarters with declining real gross national product) will not have been met. Still, a prolonged period of little or no economic growth and relatively high unemployment may be in the offing.

PAGES 63 AND 64 HAVE BEEN DELETED

RESOURCE: Farm Labor Report

FORMAT OR DELIVERY MEDIUM: Printed Booklet

GEOGRAPHIC COVERAGE: National, Regional, and State

RELEASE SCHEDULE: Quarterly (February, May, August, and November)

PRODUCING AGENCY: United States Department of Agriculture

AVAILABILITY: Available on a subscription basis from the United States Department of Agriculture, Statistical Reporting Service, Crop Reporting Board, Washington, D.C. 20250.

DATA ITEM: Farm employment estimates for farm operators, unpaid family members, and hired workers; hours worked; wage rates by method of pay and type of work.

DESCRIPTION: The Farm Labor Report has been published since 1950, providing estimates of farm employment by state and region on a monthly basis through 1974, and then on a quarterly basis starting in 1975. The quarterly estimates are based on two random samples coordinated together. The first is a sample of employers of agricultural labor, excluding agricultural service firms. The second is a sample from a complete listing of small partitioned units of land across the states. Survey weeks include the 12th of January, April, July, and October, which is consistent with other government series.

The survey identifies one farm operator for each family member, and any partners and their families that worked without pay are considered unpaid family workers. An operator is counted as employed if he worked at least one hour during the survey week; partners and unpaid family workers are considered employed if they worked at least 15 hours; and hired workers,

including paid family members, are counted as employed if they worked at least one hour. Crew leaders and crews employed directly by crew leaders, and other agricultural service employees working on a fee or contract basis are excluded. Estimates are provided by state on:

- the number of farm workers broken down into family and hired workers
- hours worked broken down into hours worked by farm operators, other unpaid family members, and hired workers
- wage rates by method of pay broken down into piece-rate, other than piece-rate, by hour only, by cash wages only, and by hour receiving cash wages only
- wage rates by type of work broken down into field, livestock, packing house, machine operators, supervisors, and other agricultural workers

There are some problems with these estimates which are based on the Quarterly Agricultural Labor Survey. Farm workers are counted more than once if they worked on more than one sampled farm during the survey week. The amount of double counting that results from this is unknown. In addition, since the estimates are based on quarterly rather than monthly surveys, they may not always reflect peak labor periods.

HOURS WORKED PER WORKER, JULY 1978 AND APRIL 1979  
BY STATES, STANDARD FEDERAL REGIONS AND UNITED STATES

STATE AND REGION	JUL 9-15, 1978				APR 8-14, 1979			
	FARM OPERATOR	: OTHER UNPAID: FAMILY MEMBERS 1/	ALL FAMILY 1/	Hired Workers	FARM OPERATOR	: OTHER UNPAID: FAMILY MEMBERS 1/	ALL FAMILY 1/	Hired Workers
	HOURS							
REGION I 2/	40.9	32.6	37.8	35.3	33.3	30.1	32.7	35.9
N J	45.5	40.5	43.7	38.7	36.7	35.0	36.2	35.0
N Y	48.0	42.7	45.7	41.2	44.4	33.6	39.1	37.1
REGION II	47.6	42.4	45.4	40.2	43.3	33.7	38.8	36.6
DEL	43.4	32.4	41.3	38.5	32.2	44.9	36.0	34.8
MD	39.4	33.9	38.2	33.5	32.8	34.0	33.2	38.3
PA	42.8	45.5	44.0	37.3	43.3	27.0	37.7	39.0
VA	35.6	39.0	37.2	30.4	26.7	39.0	28.9	40.0
W VA	28.5	32.2	29.7	32.9	23.5	25.2	23.7	28.7
REGION III	38.1	41.5	39.5	33.7	33.8	30.4	32.8	38.4
ALA	31.8	36.6	33.2	33.6	29.1	28.0	28.8	30.5
FLA	24.5	31.9	26.2	33.5	30.2	26.1	29.1	38.1
GA	28.5	38.5	30.6	28.0	36.3	30.3	34.5	37.2
KY	30.7	27.2	29.7	28.2	24.5	35.8	26.8	33.7
MISS	25.6	33.0	27.6	36.1	20.3	21.0	20.4	30.8
N C	29.7	39.1	32.4	26.7	33.9	34.3	34.0	31.5
S C	31.5	31.4	31.5	32.8	22.0	30.4	23.1	31.6
TENN	26.9	35.4	28.8	29.1	19.4	27.4	21.3	32.5
REGION IV	28.9	34.2	30.3	29.9	26.7	29.7	27.4	34.7
ILL	35.3	41.5	37.5	30.8	34.9	35.0	34.9	35.8
IND	35.3	33.2	34.7	32.7	33.1	31.9	32.7	35.0
MICH	37.3	37.1	37.2	33.1	44.3	41.5	43.1	37.3
MINN	51.4	46.1	49.1	28.4	35.3	38.2	36.2	40.3
OHIO	37.1	29.1	34.4	29.0	31.3	23.2	29.0	36.4
WIS	60.4	43.8	52.4	43.0	60.5	35.8	50.9	35.9
REGION V	43.3	40.3	42.1	33.0	39.7	34.6	37.9	36.7
ARK	29.8	35.8	31.3	35.7	28.7	31.3	29.4	30.8
LA	27.3	35.6	29.2	36.6	26.1	25.6	26.0	37.0
N MEX	41.0	41.0	41.0	42.9	36.8	29.2	35.6	43.8
OKLA	30.2	37.7	32.0	34.0	29.7	40.0	31.6	31.4
TEX	36.9	43.0	38.5	40.5	25.4	35.5	27.4	41.0
REGION VI	33.1	39.6	34.7	38.2	27.3	34.2	28.7	37.6
IOWA	49.1	39.1	44.9	27.3	42.4	32.8	39.4	29.3
KANS	50.1	45.1	48.1	45.1	41.6	36.7	40.8	40.0
MO	32.7	37.0	33.8	31.0	27.0	31.3	27.8	34.7
NEBR	56.8	42.9	51.6	44.1	43.0	34.2	40.0	39.6
REGION VII	45.4	40.7	43.7	34.4	37.2	33.1	36.1	34.7
COLO	46.7	42.1	45.0	47.9	45.0	35.9	41.0	43.4
MONT	56.7	54.8	55.9	48.4	48.4	29.3	41.0	52.9
N DAK	50.0	42.3	46.6	47.0	44.2	36.7	40.8	54.0
S DAK	60.5	41.3	52.6	50.0	49.2	46.1	48.2	39.2
UTAH	42.5	45.6	43.4	31.8	56.3	33.2	52.0	54.1
WYO	50.2	37.3	43.4	51.9	55.0	50.9	53.2	46.9
REGION VIII	52.2	43.4	48.6	46.3	48.2	38.2	44.4	51.8
ARIZ	43.5	34.6	35.7	43.5	37.5	34.0	36.7	43.6
CALIF	35.4	38.6	36.1	43.6	34.0	31.5	33.4	37.8
HAW	28.5	25.3	27.0	37.7	24.3	24.4	24.3	48.8
NEV	52.5	47.0	52.2	55.1	37.4	37.9	37.6	43.9
REGION IX	36.3	36.0	36.4	43.5	34.4	33.1	34.6	50.7
IDAHO	57.1	47.0	53.5	46.2	43.3	44.9	43.6	38.6
OREG	35.7	34.1	35.1	32.0	31.0	37.8	33.0	37.5
WASH	34.2	40.1	35.4	37.4	28.4	33.1	29.1	41.2
REGION X	40.1	39.1	39.8	37.0	32.2	37.9	33.5	38.4
U S (49 STS)	39.2	39.5	39.3	35.8	34.6	33.6	34.3	

1/ INCLUDES AS "OTHER FAMILY" ONLY THOSE HOUSEHOLD MEMBERS WORKING 15 HOURS OR MORE PER WEEK WITHOUT RECEIVING CASH WAGES. 2/ REGION I: CONN, MAINE, MASS, N H, R I, AND VT.

RESOURCE: Economic Censuses

FORMAT OR DELIVERY MEDIUM: Printed Volumes

GEOGRAPHIC COVERAGE: Nation, States, SMSAs, and Counties  
(Data for St. Louis and Kansas City SMSAs include the  
out-of-state areas of the SMSAs.)

RELEASE SCHEDULE: The surveys are taken every five years  
for years ending in "2" and "7" and the final reports  
are published approximately three years after the  
reported year.

PRODUCING AGENCY: Bureau of the Census

AVAILABILITY: Available in Public Libraries and for sale  
by the Superintendent of Documents, U.S. Government  
Printing Office, Washington, D.C. 20402.

DATA ITEM: Employment by industry; location; payroll;  
hours worked.

DESCRIPTION: The Bureau of the Census is the primary con-  
tributor to the development of the Economic Censuses although  
a number of other government agencies are involved. The  
censuses provide information on the type of business, loca-  
tion, type of ownership, dollar value of business, number of  
employees, and total payroll from establishment surveys.  
Administrative records from the Internal Revenue Service and  
the Social Security Administration are used to determine the  
mailing list and industrial classification of establishments.  
These records are also used to impute values for establish-  
ments which do not respond or are small enough to be exempt  
from filing.<sup>1</sup>

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<sup>1</sup>Data for areas where industry is comprised primarily of small establishments may be questionable as data for small firms is imputed. For rural areas, this may result in most of the employment information being derived from other government reports rather than actual survey data.

The surveys are taken the year following the reported year quinquennially for years ending in "2" or "7". Final results come out approximately three years after the reported year. Employment data is comprised of all full-time and part-time employees receiving pay for vacations, sick leave, holidays, etc.<sup>1</sup> All the censuses, with the exception of the Census of Governments, are subject to the disclosure rule, limiting the level of detail which can be shown for counties and cities.<sup>2</sup> Proprietors and partners in unincorporated businesses are not included in the Census, but salaried officers and executives are.

The industries covered by the various censuses are: manufactures, retail trade, wholesale trade, construction, transportation, government services, and selected service industries. The principal groups not covered are: finance; insurance and real estate; agriculture and forestry; communications; electric, gas and sanitary services; and most health and medical services.<sup>3</sup>

Census of Manufactures: The Census of Manufactures presents data for: employment, payroll, hours worked, and

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<sup>1</sup>This may, in some cases, result in agricultural employment being understated as employers in rural areas are less likely to have such benefits, and employees are more likely to be absent without pay during the survey week.

<sup>2</sup>The disclosure rule states that it is improper to publish employment data in any case where it would tend to reveal the operations of an individual firm or organization. In such cases, industry employment cannot be presented, but size of firm distribution may be.

<sup>3</sup>The 1977 survey of Selected Service Industries has been expanded to include more of the health sector.

information related to manufacturing such as investments and prices. Production workers in manufacturing industries are reported as an average of survey data collected for midmonth employment for four survey weeks in March, May, August, and November. Administrative and employees other than production workers in manufacturing are reported as of mid-March. Establishments are classified by Standard Industrial Code at the 4 digit level of detail. Data are published for SMSAs at the 4 digit level of detail but will not disclose individual establishment data unless the industry has at least 250 employees. Data is published at the 2 digit level for any individual city with 450 or more employees in an industry. Data for counties with 450 or more employees in an industry is published at the 2 and 3 digit level. Information for cities and counties includes size of employment, number of total establishments, and establishments with 20 or more employees. An area report is available for Missouri with information for SMSAs and cities and counties with 450 or more employees in manufacturing industries, and a general summary report is available which provides data by industry with limited state and regional detail.

The Annual Survey of Manufactures is part of the Census of Manufactures in the years that the census is conducted. It provides information on: total number of employees, number of production workers, other employees, total payroll, production workers wages, salary and wages for other workers, total man hours for production workers, and information on

investment and inventories. The report also includes a historical series presenting number of employees, payroll, and number of production workers and wages, for Missouri and St. Louis and Kansas City SMSAs. Sample data is collected for small firms, all firms with over 100 employees are included. The information is published at the 4 digit level for the nation; information for SMSAs and large industrial counties is published at the 2 and 3 digit level.

Census of Selected Service Industries: This series covers establishments primarily engaged in rendering services to individuals and business establishments. Households and religious organizations are excluded. Information is collected on: location, type of business and operation, volume of receipts, and payrolls and number of employees for the pay period including March 12th. Data are available up to the 4 digit level of detail for regions, states, SMSAs, and counties and cities with 300 or more service establishments.<sup>1</sup> For counties and cities with a population of over 2,500, data are published for employment and payrolls but are aggregated and listed only for all service industries combined. All establishments with four or more employees are included in the survey; those with one to three employees are sampled. A

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<sup>1</sup>Counties in Missouri with 300 or more service establishments include: Buchanan, Camden, Cape Girardeau, Clay, Cole, Franklin, Greene, Jackson, Jasper, Jefferson, Newton, Pettis, St. Charles, St. Francois, and St. Louis. Cities with 300 establishments include Cape Girardeau, Clayton, Columbia, Independence, Jefferson City, Joplin, Kansas City, Raytown, St. Charles, St. Joseph, St. Louis, Springfield, and University City.

general summary of the data is available which includes detail by industry for divisions, regions, and states. An area statistics report which provides detail for states, SMSAs and counties and cities with 300 or more establishments is also available, with detail as mentioned above.

Census of Mineral Industries: The Census of Mineral Industries includes establishments primarily engaged in mining and excludes the production of minerals by Federal, state, and local governments. Information is collected on: total employment, payroll for the period including March 12th, production-worker employment, man-hours, wages, and other production related costs and receipts. Data is published by industry, area, and employment size class at the state and county level by 2 digit Standard Industrial Classification code. County data includes: total number of establishments, number with 20 or more employees, number of employees, and payrolls at the 2 digit level. Multilocation companies file separate reports for each location; those with fewer than five employees are not required to file.

Census of Retail Trade: The Census of Retail Trade includes all establishments primarily engaged in selling merchandise for personal and household consumption and in rendering services incidental to the sale of goods. Information is collected on: location, kind of business, volume of sales and payrolls, and number of employees. Employment includes the number of paid employees for the pay period including March 12th. The reports for each state include

information on: number of establishments, sales, payrolls, employment, number of proprietorships and partnerships for the state, SMSAs, and areas outside of SMSAs. Establishments are classified by 4 digit detail. Data are presented for cities and counties with 500 or more retail establishments by type of business.<sup>1</sup> The number of establishments and sales are published for cities with populations of 2,500 or more and for all counties. The sizes of establishments that are exempt depend on the type of business. A general summary report is available that provides limited state and regional detail, and an area statistics report is also available which presents data for Missouri as mentioned above.

Census of Wholesale Trade: The Census of Wholesale Trade includes all establishments with one or more employees primarily engaged in selling merchandise to retailers, to industrial, commercial, institutional, farm, professional users, or to other wholesalers. Data items included are location, kind of business, volume of sales and payrolls, inventory and operating expenses, and the number of employees as of March 12th. Detail by kind of business, number of establishments, inventories at end of year, total payroll, and number of employees are provided for census regions,

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<sup>1</sup>Counties in Missouri with over 500 retail establishments are: Buchanan, Cape Girardeau, Clay, Dunklin, Franklin, Greene, Jackson, Jasper, Jefferson, St. Charles, and St. Louis. Cities with 500 or more retail establishments are: Columbia, Independence, Joplin, Kansas City, St. Joseph, St. Louis, and Springfield.

states, SMSAs, and counties with 200 or more establishments.<sup>1</sup> State data has 4 digit detail, SMSAs have up to 4 digit detail and counties show 3 digit detail. Data are presented separately for merchant wholesalers, manufacturer's sales branches and offices, and merchandise agents and brokers.

Census of Construction Industries: The Census of Construction Industries provides information for the Nation, regions, and states only. Information for Missouri includes number of employees and payroll based on payroll records for March, May, August, and November. The information is provided with 4 digit Standard Industrial Classification detail. A general summary report is available with regional detail. An area statistics report is also available, presenting data for Missouri as specified above.

Census of Governments: This series presents a variety of data, including employment and payroll, for Federal, state, and local governments. Data is collected primarily through mail surveys, with data on Federal employees obtained through the U.S. Office of Personnel Management (formerly the U.S. Civil Service Commission).

Employment is presented for the month of October (the latest available series is for 1977) and includes all persons on government payrolls. This includes persons on paid-leave status and those involved in federally funded programs such

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<sup>1</sup>Counties in Missouri with 200 or more wholesale trade establishments are: Buchanan, Clay, Greene, Jackson, Jasper, St. Louis County, and St. Louis.

as CETA. The Census excludes unpaid officials, pensioners, employees of private contractors, and persons whose work is performed on a fee basis.

Data is presented by type of government; county, municipality, township, school district, and special district<sup>1</sup>; and function, such as sanitary or health services. Employment in each functional category of employment includes not only personnel directly involved in providing the service referred to by each category but also all support personnel of the agencies. Part-time employees are reported on a full-time equivalent basis<sup>2</sup> and any temporary or seasonal employees working on a full-time basis during the reported pay period are reported as full-time employees.

From the Census of Governments two separate reports involving occupational information are published. Employment of Major Local Governments and Compendium of Public Employment.

Compendium of Public Employment presents data for state and local governments on employment, payrolls, average earnings of full-time employees, and selected benefit coverage statistics. Statistics for local governments are presented by

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<sup>1</sup>"Special Districts" are local government units created to provide specific services that are not being provided by other governments.

<sup>2</sup>"Full-time equivalent employees" represents the number of full-time employees that could have been employed at the same total payroll cost if all personnel were engaged on a full-time basis at the average monthly rate applying to full-time workers.

county area; population size group for counties, municipalities, and townships; and by enrollment size group for school districts.

Employment of Major Local Governments provides information on employment, payrolls, and average earnings of full-time employees in selected individual local governments. Information is included for all county governments, municipalities, school systems with enrollment of 5,000 or more, and special districts with 100 or more employees.

TABLE 6. Number of Mineral Establishments in Major Industry Groups, by Employment Size Class and County: 1972—Continued

{See appendix, Explanation of Terms}

Geographic area and size class	All mineral industries <sup>1</sup>	Metal mining	Anthracite mining (M.G. 11)	Bituminous coal and lignite mining (M.G. 12)	Oil and gas extraction (M.G. 13)	Nonmetallic minerals mining (M.G. 14)	Geographic area and size class	All mineral industries <sup>1</sup>	Metal mining	Anthracite mining (M.G. 11)	Bituminous coal and lignite mining (M.G. 12)	Oil and gas extraction (M.G. 13)	Nonmetallic minerals mining (M.G. 14)
	(M.G. 10)							(M.G. 10)					
IOWA--CONTINUED													
PAGE COUNTY, TOTAL . . . . .	2	-	-	-	-	-	2	BOLLINGER COUNTY, TOTAL . . . . .	1	1	-	-	-
0 TO 19 EMPLOYEES . . . . .	2	-	-	-	-	-	2	0 TO 19 EMPLOYEES . . . . .	1	1	-	-	-
PLYMOUTH COUNTY, TOTAL . . . . .	1	-	-	-	-	-	1	BOONE COUNTY, TOTAL . . . . .	3	-	-	1	-
0 TO 19 EMPLOYEES . . . . .	1	-	-	-	-	-	1	20 TO 99 EMPLOYEES . . . . .	3	-	-	1	2
POCAHONTAS COUNTY, TOTAL . . . . .	2	-	-	-	-	-	2	BUCHANAN COUNTY, TOTAL . . . . .	4	-	-	-	1
0 TO 19 EMPLOYEES . . . . .	1	-	-	-	-	-	1	0 TO 19 EMPLOYEES . . . . .	4	-	-	1	3
20 TO 99 EMPLOYEES . . . . .	1	-	-	-	-	-	1	BUTLER COUNTY, TOTAL . . . . .	3	-	-	-	3
POLK COUNTY, TOTAL . . . . .	13	-	-	-	-	4	9	0 TO 19 EMPLOYEES . . . . .	2	2	-	-	2
0 TO 19 EMPLOYEES . . . . .	11	-	-	-	-	4	7	20 TO 99 EMPLOYEES . . . . .	1	-	-	-	1
20 TO 99 EMPLOYEES . . . . .	2	-	-	-	-	-	2	CALDWELL COUNTY, TOTAL . . . . .	3	-	-	-	3
POTTAWATTAMIE COUNTY, TOTAL . . . . .	2	-	-	-	-	-	2	0 TO 19 EMPLOYEES . . . . .	3	-	-	-	3
0 TO 19 EMPLOYEES . . . . .	2	-	-	-	-	-	2	CALLAWAY COUNTY, TOTAL . . . . .	5	-	-	-	5
POWESHIEK COUNTY, TOTAL . . . . .	2	-	-	-	-	-	2	0 TO 19 EMPLOYEES . . . . .	5	-	-	-	5
0 TO 19 EMPLOYEES . . . . .	2	-	-	-	-	-	2	CAMDEN COUNTY, TOTAL . . . . .	2	1	-	-	2
SAC COUNTY, TOTAL . . . . .	2	-	-	-	-	-	2	0 TO 19 EMPLOYEES . . . . .	2	1	-	-	6
0 TO 19 EMPLOYEES . . . . .	2	-	-	-	-	-	2	CAPE GIRARDEAU COUNTY, TOTAL . . . . .	7	1	-	-	4
SCOTT COUNTY, TOTAL . . . . .	3	-	-	-	-	-	3	0 TO 19 EMPLOYEES . . . . .	5	1	-	-	2
0 TO 19 EMPLOYEES . . . . .	3	-	-	-	-	-	3	20 TO 99 EMPLOYEES . . . . .	2	-	-	-	2
SHELBY COUNTY, TOTAL . . . . .	1	-	-	-	-	-	1	CASS COUNTY, TOTAL . . . . .	5	-	-	-	5
20 TO 99 EMPLOYEES . . . . .	1	-	-	-	-	-	1	0 TO 19 EMPLOYEES . . . . .	5	-	-	-	1
SIOUX COUNTY, TOTAL . . . . .	3	-	-	-	-	1	2	CEDAR COUNTY, TOTAL . . . . .	1	-	-	-	1
0 TO 19 EMPLOYEES . . . . .	3	-	-	-	-	1	2	0 TO 19 EMPLOYEES . . . . .	1	-	-	-	1
STORY COUNTY, TOTAL . . . . .	3	-	-	-	-	-	3	CHARITON COUNTY, TOTAL . . . . .	1	-	-	-	1
0 TO 19 EMPLOYEES . . . . .	3	-	-	-	-	-	3	20 TO 99 EMPLOYEES . . . . .	1	-	-	-	1
TAYLOR COUNTY, TOTAL . . . . .	2	-	-	-	-	-	2	CHRISTIAN COUNTY, TOTAL . . . . .	3	-	-	-	3
0 TO 19 EMPLOYEES . . . . .	2	-	-	-	-	-	2	0 TO 19 EMPLOYEES . . . . .	3	-	-	-	3
UNION COUNTY, TOTAL . . . . .	1	-	-	-	-	-	1	CLARK COUNTY, TOTAL . . . . .	1	-	-	-	1
0 TO 19 EMPLOYEES . . . . .	1	-	-	-	-	-	1	0 TO 19 EMPLOYEES . . . . .	1	-	-	-	1
VAN BUREN COUNTY, TOTAL . . . . .	4	-	-	-	1	-	3	CLAY COUNTY, TOTAL . . . . .	4	-	-	-	3
0 TO 19 EMPLOYEES . . . . .	3	-	-	-	1	-	2	0 TO 19 EMPLOYEES . . . . .	4	-	-	-	3
20 TO 99 EMPLOYEES . . . . .	1	-	-	-	1	-	1	CLINTON COUNTY, TOTAL . . . . .	3	-	-	-	3
WAPELLO COUNTY, TOTAL . . . . .	4	-	-	-	2	-	2	0 TO 19 EMPLOYEES . . . . .	3	-	-	-	3
0 TO 19 EMPLOYEES . . . . .	4	-	-	-	2	-	2	COLE COUNTY, TOTAL . . . . .	5	-	-	-	5
WARREN COUNTY, TOTAL . . . . .	2	-	-	-	-	-	2	0 TO 19 EMPLOYEES . . . . .	3	-	-	-	3
0 TO 19 EMPLOYEES . . . . .	2	-	-	-	-	-	2	20 TO 99 EMPLOYEES . . . . .	2	-	-	-	2
WASHINGTON COUNTY, TOTAL . . . . .	5	-	-	-	-	2	3	COOPER COUNTY, TOTAL . . . . .	3	-	-	-	3
0 TO 19 EMPLOYEES . . . . .	5	-	-	-	-	2	3	0 TO 19 EMPLOYEES . . . . .	2	-	-	-	2
WEBSTER COUNTY, TOTAL . . . . .	3	-	-	-	-	-	3	20 TO 99 EMPLOYEES . . . . .	1	-	-	-	1
0 TO 19 EMPLOYEES . . . . .	2	-	-	-	-	-	2	CRAWFORD COUNTY, TOTAL . . . . .	3	-	-	-	3
20 TO 99 EMPLOYEES . . . . .	1	-	-	-	-	-	1	0 TO 19 EMPLOYEES . . . . .	3	-	-	-	3
20 TO 99 EMPLOYEES . . . . .	1	-	-	-	-	-	2	20 TO 99 EMPLOYEES . . . . .	1	-	-	-	1
WINNEBAGO COUNTY, TOTAL . . . . .	2	-	-	-	-	-	2	DADE COUNTY, TOTAL . . . . .	1	-	-	-	1
0 TO 19 EMPLOYEES . . . . .	2	-	-	-	-	-	2	0 TO 19 EMPLOYEES . . . . .	1	-	-	-	1
WINNESHEIKE COUNTY, TOTAL . . . . .	3	-	-	-	-	-	3	DALLAS COUNTY, TOTAL . . . . .	1	-	-	-	1
0 TO 19 EMPLOYEES . . . . .	2	-	-	-	-	-	1	0 TO 19 EMPLOYEES . . . . .	1	-	-	-	1
20 TO 99 EMPLOYEES . . . . .	1	-	-	-	-	-	2	DAVIES COUNTY, TOTAL . . . . .	1	-	-	-	1
WOODBURY COUNTY, TOTAL . . . . .	2	-	-	-	-	1	1	20 TO 99 EMPLOYEES . . . . .	1	-	-	-	1
0 TO 19 EMPLOYEES . . . . .	2	-	-	-	-	1	2	DE KALB COUNTY, TOTAL . . . . .	1	-	-	-	1
WORTH COUNTY, TOTAL . . . . .	2	-	-	-	-	-	2	0 TO 19 EMPLOYEES . . . . .	1	-	-	-	1
0 TO 19 EMPLOYEES . . . . .	2	-	-	-	-	-	2	DENT COUNTY, TOTAL . . . . .	1	-	-	-	1
WRIGHT COUNTY, TOTAL . . . . .	1	-	-	-	-	-	1	0 TO 19 EMPLOYEES . . . . .	1	-	-	-	1
0 TO 19 EMPLOYEES . . . . .	1	-	-	-	-	-	1	DOUGLAS COUNTY, TOTAL . . . . .	1	-	-	-	1
MISSOURI													
MISSOURI, TOTAL . . . . .	360	20	-	13	36	291	DUNKLIN COUNTY, TOTAL . . . . .	1	-	-	-	-	1
0 TO 4 EMPLOYEES . . . . .	165	7	-	3	30	38	0 TO 19 EMPLOYEES . . . . .	1	-	-	-	-	1
5 TO 9 EMPLOYEES . . . . .	41	1	-	-	2	54	FRANKLIN COUNTY, TOTAL . . . . .	9	-	-	-	-	9
10 TO 19 EMPLOYEES . . . . .	57	1	-	3	-	48	0 TO 19 EMPLOYEES . . . . .	8	-	-	-	-	8
20 TO 49 EMPLOYEES . . . . .	51	-	-	4	-	6	20 TO 99 EMPLOYEES . . . . .	1	-	-	-	-	1
50 TO 99 EMPLOYEES . . . . .	14	2	-	2	1	-	GASCONADE COUNTY, TOTAL . . . . .	10	-	-	-	-	10
100 TO 249 EMPLOYEES . . . . .	7	4	-	2	-	1	0 TO 19 EMPLOYEES . . . . .	9	-	-	-	-	9
250 TO 499 EMPLOYEES . . . . .	3	3	-	-	-	1	20 TO 99 EMPLOYEES . . . . .	1	-	-	-	-	1
500 TO 999 EMPLOYEES . . . . .	4	2	-	1	1	-	GENTRY COUNTY, TOTAL . . . . .	1	-	-	-	-	1
ANDREW COUNTY, TOTAL . . . . .	1	-	-	-	-	-	0 TO 19 EMPLOYEES . . . . .	1	-	-	-	-	1
0 TO 19 EMPLOYEES . . . . .	1	-	-	-	-	-	20 TO 99 EMPLOYEES . . . . .	1	-	-	-	-	1
ATCHISON COUNTY, TOTAL . . . . .	1	-	-	-	1	-	GENTRY COUNTY, TOTAL . . . . .	1	-	-	-	-	1
0 TO 19 EMPLOYEES . . . . .	1	-	-	-	1	-	0 TO 19 EMPLOYEES . . . . .	1	-	-	-	-	1
AUDRAIN COUNTY, TOTAL . . . . .	5	-	-	-	-	5	GREENE COUNTY, TOTAL . . . . .	4	-	-	-	-	4
0 TO 19 EMPLOYEES . . . . .	5	-	-	-	-	5	0 TO 19 EMPLOYEES . . . . .	3	-	-	-	-	3
BARTON COUNTY, TOTAL . . . . .	3	-	-	1	-	2	20 TO 99 EMPLOYEES . . . . .	1	-	-	-	-	1
0 TO 19 EMPLOYEES . . . . .	2	-	-	1	-	2	GRUNDY COUNTY, TOTAL . . . . .	3	-	-	-	-	3
20 TO 99 EMPLOYEES . . . . .	1	-	-	1	-	1	0 TO 19 EMPLOYEES . . . . .	3	-	-	-	-	3
BATES COUNTY, TOTAL . . . . .	2	-	-	1	-	1	HARRISON COUNTY, TOTAL . . . . .	2	-	-	-	-	2
20 TO 99 EMPLOYEES . . . . .	2	-	-	1	-	1	0 TO 19 EMPLOYEES . . . . .	1	-	-	-	-	1
BENTON COUNTY, TOTAL . . . . .	2	-	-	-	-	2	20 TO 99 EMPLOYEES . . . . .	1	-	-	-	-	1

TABLE 6. Number of Employees by Type, for Selected Periods, and Payroll,

(Detailed figures may not add to totals because

1972 SIC code	Industry group and industry	Total number of establish- ments	Number of employees								
			Average			March			May		
			All employees	Construction workers	All other employees	All employees	Construction workers	All other employees	All employees	Construction workers	All other employees
A	B	C	D	E	F	G	H	I	J		
	CONSTRUCTION INDUSTRIES AND SUBDIVIDERS AND DEVELOPERS, TOTAL . . . . .	9 498	81 432	67 750	13 709	72 728	59 637	13 091	62 725	69 031	13 694
15,16, 17	CONSTRUCTION INDUSTRIES:										
15	GENERAL BUILDING CONTRACTORS AND OPERATIVE BUILDERS:										
1521	GENERAL CONTRACTORS--SINGLE-FAMILY HOUSES .	1 965	8 827	7 456	1 365	7 649	6 428	1 221	8 918	7 596	1 322
1521	OPERATIVE BUILDERS . . . . .										
1522	GENERAL CONTRACTORS--RESIDENTIAL BUILDINGS, OTHER THAN SINGLE-FAMILY . . . . .	160	2 485	2 159	341	2 253	1 932	321	2 719	2 388	331
154	GENERAL CONTRACTORS--NONRESIDENTIAL BUILDINGS:										
1541	INDUSTRIAL BUILDINGS AND WAREHOUSES . . .	170	3 820	3 239	581	3 528	2 955	573	3 636	3 059	577
1542	NONRESIDENTIAL BUILDINGS, N.E.C.. . . . .	651	8 637	7 030	1 607	8 264	6 714	1 550	8 635	7 073	1 562
16	HEAVY CONSTRUCTION GENERAL CONTRACTORS:										
1611	HIGHWAY AND STREET CONSTRUCTION . . . . .	251	4 915	4 218	696	3 596	2 923	673	5 517	4 816	701
162	HEAVY CONSTRUCTION, EXCEPT HIGHWAY:										
1622	BRIDGE, TUNNEL, AND ELEVATED HIGHWAY CONSTRUCTION . . . . .	25	458	405	53	355	305	50	488	436	52
1623	WATER, SEWER, AND UTILITY LINES . . . . .	234	2 981	2 625	367	2 503	2 146	357	3 098	2 736	362
1629	HEAVY CONSTRUCTION, N.E.C.. . . . .	221	3 346	2 741	606	3 111	2 515	596	3 681	3 067	614
17	SPECIAL TRADE CONTRACTORS:										
1711	PLUMBING, HEATING, AND AIR CONDITIONING .	1 233	9 597	7 632	1 966	8 987	7 083	1 904	9 412	7 482	1 930
1721	PAINTING, PAPER HANGING, AND DECORATING .	608	3 185	2 869	316	2 676	2 360	316	3 232	2 919	313
1731	ELECTRICAL WORK . . . . .	518	6 178	5 173	1 005	5 733	4 773	960	6 033	5 059	974
174	MASONRY, PLASTERING, AND TILE SETTING:										
1741	MASONRY, STONE SETTING, OTHER STONWORK .	466	3 310	3 112	199	2 826	2 632	194	3 554	3 356	198
1742	PLASTERING, DRYWALL, INSULATION WORK .	281	3 593	3 183	410	3 250	2 853	397	3 448	3 039	409
1743	TERRAZZO, TILE, MARBLE, AND MOSAIC WORK .	89	442	383	59	441	380	61	444	383	61
175	CARPENTERING AND FLOORING:										
1751	CARPENTERING. . . . .	362	2 529	2 322	207	2 225	2 022	203	2 449	2 225	224
1752	FLOOR LAYING AND OTHER FLOORWORK. . . . .	164	949	748	204	943	752	191	981	747	194
1761	ROOFING AND SHEET METAL WORK. . . . .	366	3 319	2 715	604	3 403	2 486	917	3 256	2 782	474
1771	CONCRETE WORK . . . . .	477	3 465	3 151	315	2 943	2 623	320	3 547	3 228	319
1781	WATER WELL DRILLING . . . . .	89	399	332	67	360	296	64	381	311	70
179	MISCELLANEOUS SPECIAL TRADE CONTRACTORS:										
1791	STRUCTURAL STEEL ERECTION* . . . . .	64	1 156	1 012	144	953	825	128	1 129	994	135
1793	GLASS AND GLAZING WORK* . . . . .	34	299	220	80	280	197	63	267	191	76
1794	EXCAVATING AND FOUNDATION WORK . . . . .	556	2 826	2 490	335	2 574	2 250	324	3 015	2 683	332
1795	WRECKING AND DEMOLITION WORK . . . . .	20	184	162	22	145	126	19	219	200	19
1796	INSTALLLING BUILDING EQUIPMENT, N.E.C. . . . .	32	807	628	181	884	709	175	567	371	176
1799	SPECIAL TRADE CONTRACTORS, N.E.C. . . . .	232	1 721	1 427	294	1 327	1 052	275	1 738	1 448	290
6552	SUBDIVIDERS AND DEVELOPERS, N.E.C.. . . . .	230	2 004	318	1 685	1 519	300	1 219	2 421	442	1 979

Standard Notes: - Represents zero. D Withheld to avoid disclosing figures for individual companies. All such figures are included in higher level totals. S Withheld because the estimate did not meet publication standards on the basis of either the associated standard error or a consistency review. Z Standard error of estimate is greater than zero but less than 1%.

\*Sampling error is greater than 40%.

Sample page of Census of Construction Industries.

Table 1. Employment, Payrolls and Average Earnings in Individual County Governments,  
by State: October 1977—Continued

Item	Missouri—Continued									
	Atchison	Audrain	Berry	Barton	Bates	Benton	Bollinger	Boone	Buchanan	Butler
POPULATION, 1975 (ESTIMATED) . . . . .	9 369	25 709	21 667	10 920	16 460	11 737	9 722	87 230	86 321	36 659
NUMBER OF EMPLOYEES. . . . .	31	624	41	145	(NA)	38	62	1 022	173	(NA)
FULL-TIME ONLY . . . . .	30	615	40	105	(NA)	36	52	777	164	(NA)
FULL-TIME EQUIVALENT EMPLOYMENT. . . . .	30	618	41	121	(NA)	38	55	892	166	(NA)
FOR SELECTED FUNCTIONS:										
EDUCATION. . . . .	-	-	-	-	(NA)	-	-	-	-	(NA)
HIGHWAYS . . . . .	9	4	-	-	(NA)	9	16	32	40	(NA)
PUBLIC WELFARE . . . . .	-	-	-	-	(NA)	-	-	9	-	(NA)
HOSPITALS. . . . .	-	564	-	97	(NA)	-	-	716	-	(NA)
HEALTH . . . . .	-	-	-	(NA)	-	-	7	-	-	(NA)
POLICE PROTECTION. . . . .	3	8	10	6	(NA)	7	4	33	31	(NA)
POLICE OFFICERS ONLY . . . . .	3	8	10	6	(NA)	7	4	33	29	(NA)
FIRE PROTECTION . . . . .	-	-	-	-	(NA)	-	-	5	-	(NA)
FIREFIGHTERS ONLY . . . . .	-	-	-	-	(NA)	-	-	-	-	(NA)
PARKS AND RECREATION . . . . .	-	-	-	-	(NA)	-	-	-	-	(NA)
NATURAL RESOURCES. . . . .	-	-	-	-	(NA)	-	-	-	-	(NA)
CORRECTION . . . . .	-	2	-	-	(NA)	-	1	23	-	(NA)
LIBRARIES. . . . .	-	-	-	-	(NA)	-	3	-	-	(NA)
FINANCIAL ADMINISTRATION . . . . .	4	7	5	2	(NA)	6	8	17	23	(NA)
GENERAL CONTROL . . . . .	13	29	26	13	(NA)	14	9	49	46	(NA)
OTHER AND UNALLOCABLE. . . . .	1	4	-	2	(NA)	2	4	6	14	(NA)
OCTOBER PAYROLLS, TOTAL . . . . \$1,000.	18	402	19	76	(NA)	21	30	666	109	(NA)
FOR FULL-TIME EMPLOYEES ONLY . . . . DO. . . . .	18	399	18	66	(NA)	20	29	581	107	(NA)
AVERAGE OCTOBER EARNINGS, FULL-TIME EMPLOYEES . . . DOLLARS. . . . .	611	649	461	629	(NA)	568	560	747	654	(NA)
NONINSTRUCTIONAL EMPLOYEES ONLY . . . . . DO. . . . .	611	649	461	629	(NA)	568	560	747	654	(NA)
Missouri—Continued										
	Caldwell	Callaway	Camden	Cape Girardeau	Carroll	Carter	Cass	Cedar	Chariton	Christian
	8 928	28 165	16 419	52 115	12 227	4 567	47 767	10 812	10 599	19 576
POPULATION, 1975 (ESTIMATED) . . . . .	37	220	81	118	44	24	265	116	35	(NA)
NUMBER OF EMPLOYEES. . . . .	25	171	49	96	36	19	194	98	27	(NA)
FULL-TIME ONLY . . . . .	28	198	72	104	38	20	212	104	28	(NA)
FULL-TIME EQUIVALENT EMPLOYMENT. . . . .										
FOR SELECTED FUNCTIONS:										
EDUCATION. . . . .	-	-	-	-	-	-	-	-	-	(NA)
HIGHWAYS . . . . .	4	15	28	15	6	12	30	3	5	(NA)
PUBLIC WELFARE . . . . .	-	-	-	-	-	-	1	-	-	(NA)
HOSPITALS. . . . .	-	128	-	7	-	-	83	74	3	(NA)
HEALTH . . . . .	3	3	8	4	6	5	4	-	3	(NA)
POLICE PROTECTION. . . . .	4	13	13	17	8	5	14	7	3	(NA)
POLICE OFFICERS ONLY . . . . .	4	13	12	17	7	3	9	5	3	(NA)
FIRE PROTECTION . . . . .	-	-	-	-	-	-	-	-	-	(NA)
FIREFIGHTERS ONLY . . . . .	-	-	-	1	-	-	-	-	-	(NA)
PARKS AND RECREATION . . . . .	-	-	-	8	-	-	-	-	-	(NA)
NATURAL RESOURCES. . . . .	-	-	-	-	-	-	9	-	1	(NA)
CORRECTION . . . . .	-	-	-	8	-	-	19	-	-	(NA)
LIBRARIES. . . . .	-	-	-	-	-	-	19	3	4	(NA)
FINANCIAL ADMINISTRATION . . . . .	-	9	8	24	1	5	19	-	-	(NA)
GENERAL CONTROL. . . . .	16	30	15	32	16	-	25	13	12	(NA)
OTHER AND UNALLOCABLE. . . . .	1	-	-	3	1	-	8	4	-	(NA)
OCTOBER PAYROLLS, TOTAL . . . . \$1,000.	13	141	47	74	23	14	141	72	17	(NA)
FOR FULL-TIME EMPLOYEES ONLY . . . . DO. . . . .	12	122	31	68	22	13	128	67	16	(NA)
AVERAGE OCTOBER EARNINGS, FULL-TIME EMPLOYEES . . . DOLLARS. . . . .	473	714	641	711	603	669	660	683	608	(NA)
NONINSTRUCTIONAL EMPLOYEES ONLY . . . . . DO. . . . .	473	714	641	711	603	669	660	683	608	(NA)
Missouri—Continued										
	Clark	Clay	Clinton	Cole	Cooper	Crawford	Dade	Dallas	Daviess	De Kalb
	8 109	133 198	14 409	50 226	14 572	16 355	7 358	11 666	8 785	7 947
POPULATION, 1975 (ESTIMATED) . . . . .	36	514	58	149	(NA)	(NA)	35	67	25	30
NUMBER OF EMPLOYEES. . . . .	32	477	51	124	(NA)	(NA)	32	57	20	16
FULL-TIME ONLY . . . . .	33	496	51	134	(NA)	(NA)	33	60	21	18
FULL-TIME EQUIVALENT EMPLOYMENT. . . . .										
FOR SELECTED FUNCTIONS:										
EDUCATION. . . . .	-	-	-	-	(NA)	(NA)	-	-	-	-
HIGHWAYS . . . . .	14	42	16	36	(NA)	(NA)	-	26	3	4
PUBLIC WELFARE . . . . .	-	-	-	-	(NA)	(NA)	2	-	-	-
HOSPITALS. . . . .	-	-	-	-	(NA)	(NA)	6	5	3	-
HEALTH . . . . .	-	30	-	8	(NA)	(NA)	9	6	5	5
POLICE PROTECTION. . . . .	3	58	9	19	(NA)	(NA)	8	5	5	5
POLICE OFFICERS ONLY . . . . .	3	50	9	9	(NA)	(NA)	-	-	-	-
FIRE PROTECTION . . . . .	-	-	-	-	(NA)	(NA)	-	-	-	-
FIREFIGHTERS ONLY . . . . .	-	-	-	-	(NA)	(NA)	-	-	-	-
PARKS AND RECREATION . . . . .	-	6	-	20	(NA)	(NA)	-	-	-	-
NATURAL RESOURCES. . . . .	-	88	1	11	(NA)	(NA)	-	-	-	-
CORRECTION . . . . .	-	-	-	-	(NA)	(NA)	-	-	3	-
LIBRARIES. . . . .	3	40	9	12	(NA)	(NA)	4	5	-	-
FINANCIAL ADMINISTRATION . . . . .	12	102	13	28	(NA)	(NA)	12	11	10	11
GENERAL CONTROL. . . . .	1	130	3	-	(NA)	(NA)	-	4	-	-
OTHER AND UNALLOCABLE. . . . .	20	279	27	93	(NA)	(NA)	16	32	13	11
OCTOBER PAYROLLS, TOTAL . . . . \$1,000.	20	266	26	85	(NA)	(NA)	16	30	12	9
FOR FULL-TIME EMPLOYEES ONLY . . . . DO. . . . .	20	266	26	85	(NA)	(NA)	16	30	12	9
AVERAGE OCTOBER EARNINGS, FULL-TIME EMPLOYEES . . . DOLLARS. . . . .	617	559	508	686	(NA)	(NA)	485	529	621	583
NONINSTRUCTIONAL EMPLOYEES ONLY . . . . . DO. . . . .	617	559	508	686	(NA)	(NA)	485	529	621	583

See footnotes at end of table.

RESOURCE: Census of Agriculture

FORMAT OR DELIVERY MEDIUM: Volume for each state

GEOGRAPHIC COVERAGE: National, State, and County

RELEASE SCHEDULE: Every five years (the latest available edition is for 1974)

PRODUCING AGENCY: Bureau of the Census

AVAILABILITY: Available at Missouri Resource Libraries and for sale by the Superintendent of Documents, U.S. Government Printing Office, Washington, D.C. 20402.

DATA ITEM: Payroll and employment for farms.

DESCRIPTION: The Census of Agriculture is taken every five years with the latest census being taken in 1979. The employment data from the census is not comparable with any other source as it is based on employers' estimates of the total number of workers hired during the year.

At the state and county level, the data for farms with sales of \$2,500 and over is presented on the number of employees working 150 days or more and the number working less for the census year, as well as expenditures for hired and contract labor.

The Census inaccurately estimates the number of employees because farm workers may have more than one employer during the year. In addition, there is no estimate of self-employed farm workers.

Table 11. Irrigation and Commercial Fertilizer on Pastureland and Harvested Crops for Farms With Sales of \$2,500 and Over: 1974 and 1969—Continued

	Forms	Acres	Quantity	Irrigated land		Commercial fertilizer used			
						Total		Dry	
				Farms	Acres	Farms	Acres	Farms	Tons
Berries for sale -----	1974-----	—	(X)	—	—	—	—	—	—
1969-----	7	1	(X)	—	—	4	(Z)	4	(Z)
Nursery and greenhouse products -----	1974-----	2	17	(X)	—	1	7	1	4
1969-----	3	6	(X)	1	(Z)	2	5	2	4
Other crops -----	1974-----	1	12	(X)	—	—	—	—	—

Table 12. Agricultural Chemicals Used and Cost of Materials for Farms With Sales of \$2,500 and Over: 1974 and 1969

	1974	1969	1974	1969	
Total chemical costs, including fertilizer and lime -----	farms-----	427	521	1	4
\$1,000-----	farms-----	739	541	100	46
Commercial fertilizer -----	acres on which used-----	407	449	3	(Z)
farms-----	acres-----	31 051	35 641	\$1,000-----	103
\$1,000-----	tons-----	3 845	5 342	9 444	8 674
Lime -----	acres on which used-----	624	443	53	27
farms-----	acres-----	2 159	4 371	6	22
\$1,000-----	tons-----	5 572	11 672	76	256
Sprays, dusts, granules, fumigants, etc. to control—	farms-----	28	50	10	(NA)
Insects on hay crops-----	farms-----	2	16	79	(NA)
acres on which used-----	acres-----	65	238	(Z)	(NA)
\$1,000-----	acres-----	(Z)	1	7	182
Insects on other crops -----	farms-----	28	52	—	1
acres on which used-----	acres-----	2 496	2 601	31	108
\$1,000-----	acres-----	24	6	2	4
Nematodes in crops -----	farms-----	3	2	26	(NA)
acres on which used-----	acres-----	180	400	1	(NA)
\$1,000-----	acres-----	1	6	5	(NA)

Table 13. Irrigation, Artificial Drainage, and Artificial Ponds for Farms With Sales of \$2,500 and Over: 1974 and 1969

	1974	1969	1974	1969	
Farms irrigated in census year -----	farms-----	4	3	1	(NA)
Proportion of farms -----	percent-----	0.7	0.5	30	(NA)
Total land irrigated -----	acres-----	211	57	2	(NA)
Average per farm -----	acres-----	52.8	19.0	81	(NA)
Cropland irrigated -----	farms-----	4	3	2 076	1 284
Harvested cropland irrigated -----	farms-----	211	57	1 430	985
acres-----	acres-----	4	3	1 103	613
Cropland pasture irrigated -----	farms-----	211	57	Farms not irrigated in 1974 but irrigated between 1970 and 1973 -----	00
acres-----	acres-----	—	—	acres irrigated in most recent year -----	00
Other cropland irrigated -----	farms-----	—	—	34	41
acres-----	acres-----	—	—	Proportion of farms -----	6.1
Pasture irrigated, other than cropland pasture -----	farms-----	—	—	Land in farms with drainage -----	12 590
acres-----	acres-----	—	—	Land drained -----	4 046
Estimated quantity of irrigation water applied -----	acre-feet-----	95	34	Artificial ponds, pits, reservoirs, and earthen tanks -----	119.0
Average per acre irrigated -----	acre-feet-----	0.5	0.6	number-----	233
Land irrigated by -----	farms-----	1	(NA)	acres-----	1 016
furrows or ditches -----	farms-----	100	(NA)	—	526

Table 14. Farm Credit for Farms With Sales of \$2,500 and Over: 1974

	Total operator debt		Secured by real estate		Not secured by real estate	
	farms-----	\$1,000-----	farms-----	199	3 413	108
Farms with debt owed by farm operator (see text) -----	farms-----	4 501	4 501	4 501	3 413	1 088
Farms by size of debt owed:						
Under \$5,000 -----	46	—	26	—	—	54
\$5,000 to \$9,999 -----	35	—	35	—	—	23
\$10,000 to \$29,999 -----	70	—	53	—	—	23
\$30,000 to \$49,999 -----	18	—	23	—	—	4
\$50,000 and over -----	30	—	18	—	—	4

Table 15. Payroll and Employment for Farms With Sales of \$2,500 and Over: 1974 and 1969

	Forms		Workers		Dollars (\$1,000)			1974 hired farm workers working—				
	1974	1969	1974	1969	1974	1969		Total	150 days or more	25 to 149 days	Less than 25 days	
								Farms	Cash wages paid \$1,000..	Number of workers	Farms with—	
Hired farm workers working—								182	24	31	152	
150 days or more -----	24	23	28	26	92	186	46	186	92	47	46	
25 to 149 days -----	31	274	57	914	47	561	28	561	53	57	561	
Less than 25 days -----	152	19	561	(NA)	15	6	1	1	6	7	6	
Total contract labor -----	16	(NA)	(NA)	(NA)	15	6	1	1	1	7	35	
Farms reporting number of contract workers furnished by contractor -----	3	(NA)	14	(NA)	5	(NA)	27	—	—	1	25	
							11	—	—	—	10	

SECTION FOUR

RELATED LABOR FORCE DATA SOURCES

RESOURCE: Annual Labor Force Summary

FORMAT OR DELIVERY MEDIUM: Computer printout of table

GEOGRAPHIC COVERAGE: State, SMSAs, and Counties

RELEASE SCHEDULE: Published annually in April for the past year for the state and SMSAs, and in September for counties.

PRODUCING AGENCY: Bureau of Labor Statistics

AVAILABILITY: Available upon request, contact Labor Market Analyst of local Job Service Office.

DATA ITEM: Employment and unemployment data for the civilian labor force by month.

DESCRIPTION: This report on labor force and employment is published by the Bureau of Labor Statistics. It is prepared annually with State and SMSA tables prepared in April following the reported year, and for other counties in September. The report provides information by month for the past year on civilian labor force, employment, and unemployment. The information is provided for the SMSA as a whole and then by county. The state report contains information on employment levels for the past several years.

U.S. DEPARTMENT OF LABOR  
BUREAU OF LABOR STATISTICS  
Historical Report on Labor Force and Employment

Region: 07 State: 129 MISSOURI  
(1-2)

Date Submitted: \_\_\_/\_\_\_/\_\_\_

Area: 1SM1740003 COLUMBIA SMSA  
(4-12)-79

YEAR/MONTH <u>(20-24)</u>	CIVILIAN <u>LABOR FORCE</u> <u>(26-34)</u>	EMPLOYMENT <u>(36-44)</u>	UNEMPLOYMENT <u>NUMBER</u> <u>(46-54)</u>	UNEMPLOYMENT <u>RATE</u> <u>(56-64)</u>
<u>JANUARY</u> 78 01	<u>51,191</u>	<u>49,177</u>	<u>2,014</u>	<u>3.9</u>
<u>FEBRUARY</u> 78 02	<u>52,695</u>	<u>50,781</u>	<u>1,914</u>	<u>3.6</u>
<u>MARCH</u> 78 03	<u>53,652</u>	<u>52,008</u>	<u>1,644</u>	<u>3.1</u>
<u>APRIL</u> 78 04	<u>53,188</u>	<u>51,763</u>	<u>1,425</u>	<u>2.7</u>
<u>MAY</u> 78 05	<u>53,621</u>	<u>51,874</u>	<u>1,747</u>	<u>3.3</u>
<u>JUNE</u> 78 06	<u>51,009</u>	<u>49,324</u>	<u>1,685</u>	<u>3.3</u>
<u>JULY</u> 78 07	<u>51,652</u>	<u>49,974</u>	<u>1,678</u>	<u>3.2</u>
<u>AUGUST</u> 78 08	<u>50,950</u>	<u>49,509</u>	<u>1,441</u>	<u>2.8</u>
<u>SEPTEMBER</u> 78 09	<u>53,430</u>	<u>51,993</u>	<u>1,437</u>	<u>2.7</u>
<u>OCTOBER</u> 78 10	<u>53,953</u>	<u>52,485</u>	<u>1,468</u>	<u>2.7</u>
<u>NOVEMBER</u> 78 11	<u>54,303</u>	<u>52,781</u>	<u>1,522</u>	<u>2.8</u>
<u>DECEMBER</u> 78 12	<u>54,618</u>	<u>52,774</u>	<u>1,844</u>	<u>3.4</u>
<u>ANN. AVG.</u> 78 13	<u>52,856</u>	<u>51,204</u>	<u>1,652</u>	<u>3.1</u>

Sample page of Annual Labor Force Summary.

RESOURCE: Annual Planning Report (APR)

FORMAT OR DELIVERY MEDIUM: Pamphlet

GEOGRAPHIC COVERAGE: State and SMSAs

RELEASE SCHEDULE: Published annually at the end of April

PRODUCING AGENCY: Missouri Division of Employment Security  
and local Job Service offices

AVAILABILITY: Available upon request, contact local Labor  
Market Analyst.

DATA ITEM: Characteristics of disadvantaged and nondisadvantaged residents in need of manpower services; employment outlook by industry and occupation.

DESCRIPTION: These reports are prepared by local analysts and published by the Missouri Division of Employment Security. The information used in the reports comes from the Employment and Training Administration, U.S. Department of Labor, local sources such as welfare departments and school boards, and from local Job Service offices. The Annual Planning Report provides information on the numbers and characteristics of disadvantaged workers and others in need of employment related assistance. The figures are derived from 1970 Census data, using special census surveys and the Current Population Survey to update the information. The publication is designed for use by CETA planners in designing employment and training programs, but may also be useful for community planners, educators, and government officials. The APR's are published annually, and are released about April 30. A typical Annual Planning Report contains:

- a description of the area including economic development, population and labor force characteristics and trends
- employment developments and outlook by industry and by occupation. These reports provide five year projections, using data from the Occupational Employment Statistics program.
- characteristics of the disadvantaged and nondisadvantaged who are in need of manpower services.

TABLE 2  
POPULATION, LABOR FORCE, AND UNEMPLOYMENT PROJECTIONS  
Columbia, Mo. SMSA  
(Boone Co.)  
Fiscal Year 1980 Averages

Age Group		Total	White Male	White Female	Nonwhite Male	Nonwhite Female
16-17	Population	3,927	1,774	1,792	175	186
	Labor Force	2,449	1,242	937	152	118
	Unemployment	370	216	90	40	24
	Rate - %	15.1	17.4	9.6	26.3	20.3
18-19	Population	3,927	1,774	1,792	175	186
	Labor Force	1,815	771	728	141	175
	Unemployment	205	59	49	59	38
	Rate - %	11.3	7.7	6.7	41.8	21.7
20-24	Population	19,151	7,536	10,614	439	562
	Labor Force	12,055	4,616	6,919	247	273
	Unemployment	734	283	316	57	78
	Rate - %	6.1	6.1	4.6	23.1	28.5
25-34	Population	28,084	14,161	12,226	764	925
	Labor Force	21,338	11,487	8,777	478	596
	Unemployment	616	311	227	0	78
	Rate - %	2.9	2.7	2.6	0.0	13.1
35-44	Population	10,878	4,880	5,121	437	440
	Labor Force	8,045	4,104	3,098	403	440
	Unemployment	65	52	0	13	0
	Rate - %	0.8	1.3	0.0	3.2	0.0
45-64	Population	16,789	7,598	8,193	425	573
	Labor Force	10,880	5,919	4,427	246	288
	Unemployment	281	54	150	17	60
	Rate - %	2.6	0.9	3.4	6.9	20.8
65 and over	Population	8,329	3,089	4,731	216	293
	Labor Force	1,419	803	538	47	31
	Unemployment	49	49	0	0	0
	Rate - %	3.5	6.1	0	0	0
Under 16	Population	28,915	13,153	12,692	1,516	1,554
All Ages.	Population	120,000	53,973	57,161	4,147	4,719

#### PERSONS BELOW THE POVERTY LEVEL

Table 3 shows the number of persons below the poverty level from the 1970 Census whereas Table 4 shows the projected number for 1980 prepared using a Department of Labor worksheet.

TABLE 3  
PERSONS BELOW THE POVERTY LEVEL

	1970 Census			
	Columbia, Mo. SMSA			
	All Persons	White	Black	Related Children Under 18
	10,309	8,899	1,247	2,111
				65 and Over
				1,757

Sample page from Annual Planning Report.

RESOURCE: Table of Working Life

FORMAT OR DELIVERY MEDIUM: Tables, printed and microfiche

GEOGRAPHIC COVERAGE: Nation, state

RELEASE SCHEDULE: Latest tables available are from 1960 census data for women and 1970 census data for men

PRODUCING AGENCY: Bureau of Labor Statistics

AVAILABILITY: Available in print or microfiche at Missouri Resource Libraries. See Estimating Occupational Separations from the Labor Force for States, Tomorrow's Manpower Needs, Supp. No. 4, and BLS Bulletin 1769 for labor force separation rates for all states and the nation.

DATA ITEM: Estimated population entering labor force by age and sex.

DESCRIPTION: Tables of Working Life are statistical devices designed by the Bureau of Labor Statistics for calculating how long the average person at each age will remain in the labor force. From this information, manpower planners can estimate the number of openings that will arise in various occupations due to people leaving the labor force. Their reasons for leaving, known as the "death and retirement rate," include temporary withdrawal due to such things as illness, childbirth and marriage, or permanent withdrawal due to disability, death, and retirement (but not turnover between jobs while remaining in the labor force).

A life table starts with a hypothetical population of 100,000 persons born alive and follows the death rates of the real population at each age. The tables also indicate the labor force participation rate of the initial group of 100,000 starting from age 16. The tables are set up for both men and

women and account for deaths and retirements at each age level. Separation rates are calculated from census information on occupational age and sex distributions. This methodology assumes that the age and sex distribution of an occupation will remain the same as it was in the census year. The separation rate from the labor force for an occupation is computed by applying the age-specific rate by sex to the number in that occupation in each respective age-sex interval. The same age-specific separation rates apply to age distributions as if mortality and retirement do not differ by occupation. This gives the number of separations which, when divided by the total occupational employment, results in a labor force separation rate for the occupation.

Separation rates for women take into account separations due to marriage and childbirth as well as deaths and retirements. Separations are broken out into some of the major reasons for women's withdrawal from the labor force: marriage, birth of children, death, and age. Accessions are broken out into: age, children reaching school age, and loss of husband. The characteristics of marriage and the presence of children are assumed to have the same effect on all women regardless of occupation. It is known, however, that the more education women have, the higher their labor force participation and their concentration in certain occupations. Separation rates for males under 34 years of age take only death and disability into account as retirements for this age group are not considered significant.

The last year for which a complete working life table for women was developed /was 1960. Separation rates for women for 1970 and 1985 have been developed from the corresponding values of the 1960 table. However, any changes between the two tables reflect changes in mortality rates only, and not changes in the relative proportions of women in different marital and child status categories. Information is being developed for a complete table from the 1970 Census information. 1970 is the last year for which a complete table is available for men.

Table 3.  
Estimated Number of Women Entering the Labor Force, 1960  
[Numbers in thousands]

Age group	Female population	Total entries		Entries related to					
				Age		Children reaching school age		Loss of husband	
		Rate	Number	Rate	Number	Rate	Number	Rate	Number
Total	64,961	1.296	-----	916	-----	309	-----	71	
14-19	7,934	.0898	.712	.0898	712	(1)	(1)	(1)	(1)
20-24	5,520	.0323	178	.0316	174	.0007	4	(1)	(1)
25-29	5,537	.0076	42	.0025	14	.0051	28	(1)	(1)
30-34	6,111	.0114	69	.0007	4	.0107	65	(1)	(1)
35-39	6,419	.0150	96	.0017	11	.0125	80	.0008	5
40-44	5,918	.0144	86	.0001	1	.0126	75	.0017	10
45-49	5,554	.0102	57	(1)	(1)	.0077	43	.0025	14
50-54	4,932	.0064	32	(1)	(1)	.0028	14	.0036	18
55-59	4,411	.0038	16	(1)	(1)	.0001	(1)	.0037	16
60-64	3,727	.0021	8	(1)	(1)	(1)	(1)	.0021	8
65 and over	8,898	(1)	(1)	(1)	(1)	(1)	(1)	(1)	-----

<sup>1</sup> Amount not significant.

SOURCE: Based on data from U. S. Department of Commerce; Bureau of the Census; and U. S. Department of Health, Education, and Welfare; Public Health Service.

Table 4.  
Estimated Number of Women Separated from the Labor Force, 1960  
[Numbers in thousands]

Age group	Female labor force	Total separations		Separations related to							
				Marriage		Birth of children		Death		Age	
		Rate	Number	Rate	Number	Rate	Number	Rate	Number	Rate	Number
Total	23,272	1.119	-----	84	-----	140	-----	138	-----	457	
14-19	2,078	.0634	131	.0140	29	.0488	101	.0006	1	(1)	(1)
20-24	2,542	.1066	271	.0159	40	.0900	129	.0007	2	(1)	(1)
25-29	1,955	.0393	77	.0031	6	.0553	69	.0009	2	(1)	(1)
30-34	2,180	.0122	27	.0022	5	.0088	19	.0012	3	(1)	(1)
35-39	2,627	.0084	22	.0015	4	.0051	13	.0018	5	(1)	(1)
40-44	2,773	.0188	52	(1)	(1)	.0026	7	.0024	8	.0131	37
45-49	2,879	.0269	78	(1)	(1)	.0006	2	.0042	12	.0221	61
50-54	2,349	.0377	89	(1)	(1)	(1)	(1)	.0063	15	.0314	74
55-59	1,797	.0645	116	(1)	(1)	(1)	(1)	.0092	17	.0553	99
60-64	1,196	.1079	129	(1)	(1)	(1)	(1)	.0143	17	.0936	112
65 and over	301	1411	127	(1)	(1)	(1)	(1)	.0630	56	.0781	71

<sup>1</sup> Amount not significant.

SOURCE: Based on data from U. S. Department of Commerce; Bureau of the Census; and U. S. Department of Health, Education, and Welfare; Public Health Service.

RESOURCE: Current Population Survey (CPS)

FORMAT OR DELIVERY MEDIUM: Data is used in conjunction with other series and is published in a variety of sources, such as Employment and Earnings.

GEOGRAPHIC COVERAGE: Nation, state and local areas.

PRODUCING AGENCY: Bureau of the Census

AVAILABILITY: The data from CPS is published in other sources (see Employment and Earnings).

DATA ITEM: Employment by occupation and industry; population characteristics (age, race, sex, and education); characteristics and experience of those not in labor force.

DESCRIPTION: The Current Population Survey is a monthly survey of approximately 56,000 households throughout the country conducted by the Bureau of the Census, analyzed and published by the Bureau of Labor Statistics. The program provides data on: total employment, hours worked, industry and occupation group<sup>1</sup>, age, race, sex, education, and reasons for non-participation in the labor force. Information is also collected on the characteristics and past work experience of those not in the labor force. CPS, as an indicator of unemployment and employment, is statistically reliable only at the national level. If annual averages are used rather than monthly data, CPS is reliable for states and a few large areas. The information does, however, play a vital role in local area unemployment and employment estimates, as well as

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<sup>1</sup>Data from the CPS program should be used to measure aggregate labor force activity only, not occupational and industrial employment. The Occupational Employment Statistics and Current Employment Statistics programs provide more reliable data for employment by occupation and industry.

being used in conjunction with other data series to provide more reliable estimates of population and labor force characteristics.

Local area estimates are developed primarily from the 70-step or Handbook procedure, developed by the Bureau of Labor Statistics, which relies heavily on data from unemployment insurance (UI) records which are supplemented by a series of estimates to account for workers not covered by the UI system. The coverage of individuals under the UI programs varies from state to state due to differences in state laws concerning eligibility, disqualification, duration of benefits, waiting periods, etc., creating artificial differences in levels of unemployment between states when UI claims are the basis of estimates. CPS data is used to set control totals for the unemployment and employment estimates at the state level. CPS monthly statistics are averaged for the year by state to establish the level of unemployment and employment, with the Handbook method based on UI records establishing month-to-month changes. For substate areas, CPS estimates for unemployment and employment are allocated proportionately to population levels and are used in conjunction with the Handbook method estimates which are adjusted to meet state totals.<sup>1</sup>

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<sup>1</sup>The exact technique and importance placed on variables in estimating employment and unemployment for substate areas varies with the size of the area and the amount of data available for that area. Data for small areas is subject to substantial estimating errors as both the CPS and Handbook estimates are drawn from much smaller samples. Data is also less reliable for occupations without significant employment. For more detailed information, see "Measuring Unemployment in States & Local Areas," Monthly Labor Review, June 1974, J. Wetzel and Martin Ziegler.

The sample for the Current Population Survey is scientifically selected to represent the civilian noninstitutional population. Respondents are interviewed by trained interviewers to ascertain the employment status of each member of the household 16 years and older. Statistics are also collected and published for 14 and 15 year olds. Inmates of institutions, members of the armed forces and persons under 14 are not covered in the regular monthly survey. Persons are classified as employed or unemployed depending on their activity or status during the calendar week including the 12th of the month. The CPS definition of "unemployed" is: "All persons who did not work during the survey week, who made specific efforts to find a job within the past four weeks, and who were available for work during the survey week (except for temporary illness). Also included as unemployed are those who did not work at all but were available for work, and were waiting to be recalled or were waiting to report to a new job within 30 days."<sup>1</sup>

Households are surveyed for a total of 8 months. They are interviewed monthly for 4 months, left out of the sample for the next 8 months, and then included for 4 more months. The purpose of this strategy is to provide stability and continuity of data for month-to-month and year-to-year comparisons which might not be achieved by a new sample every month. Missing households and/or family members may bias the survey.

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<sup>1</sup>Employment and Earnings, May 1979, p. 152. BLS, Washington, D.C.

as they tend to have different characteristics than other people in the categories they are included with.

After persons are interviewed, the total numbers are "weighted" to take into account the age, sex, race, and urban-rural distribution proportions. Figures for unemployment are seasonally adjusted to account for cyclical variations in employment and unemployment. Data for occupations are classified according to the 1970 Census structure but will be revised in 1981, as will the Census, in accordance with the Standard Occupational Classification structure. Statistics are published separately for metropolitan and nonmetropolitan areas.

RESOURCE: Manpower Information for Affirmative Action Programs

FORMAT OR DELIVERY MEDIUM: Printed pamphlet

RELEASE SCHEDULE: Prepared annually for State and SMSAs in May; county labor areas in October

PRODUCING AGENCY: Missouri Division of Employment Security and local Job Service offices

AVAILABILITY: Available upon request from local Job Service offices; contact local Labor Market Analyst.

DATA ITEM: Employment by occupational group indicating sex and minority status of workers; last occupation of experienced unemployed by sex and minority status; occupational characteristics of job applicants at local Job Service offices.

DESCRIPTION: Manpower Information for Affirmative Action Programs contains information for use by employers in utilizing minority groups and women and in establishing affirmative action goals or plans. Demographic data, such as: the proportion of minorities and women in specific areas; distribution of employed persons by sex and minority status by major occupational group; and last occupation of the experienced unemployed by sex and minority status are from 1970 Census information and the most recent annual estimates derived from census data. Average labor force, employment and unemployment data are calculated by the Missouri Division of Employment Security in cooperation with the Bureau of Labor Statistics. Current information on the occupational characteristics of job applicants at local Employment Security offices is taken from their Automated Reporting System (ESARS). (See page 35 of this report.)

The census data has some limitations in that it may not

be current enough for the user's purpose. Data on the experienced unemployed and on applicants at local Employment Security offices are reported in broad occupational categories which may limit their usefulness in certain applications.<sup>1</sup> In addition, applicants at Employment Security offices represent only part of the available labor force and may not adequately represent available local manpower.<sup>2</sup>

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<sup>1</sup>Employment Security information on unemployed individuals cannot be compared with census information on the occupations of the experienced unemployed as they use two different measures of unemployment. Employment Security primarily uses data from Unemployment Insurance claims which are affected by state laws concerning eligibility requirements, disqualification, duration of benefits, waiting periods, etc.

<sup>2</sup>This information is further limited by the fact that not all persons registered with Employment Security are unemployed. Some persons may be currently working but looking for another job.

Sample page from Manpower Information for Affirmative Action Programs.

MODES-3548-R1  
R&A 4-74

Table 2. Employment Status by Sex and Minority Status

Sex and Minority Status	Boone County			Average for 1977			Unemployment Rate	
	Labor Force	Employed	Unemployed	Percent Distribution				
				Labor Force	Employed	Unemployed		
(1)	(2)	(3)	(4)	(5)	(6)	(7)		
<u>Both Sexes</u>								
1. Total	51,890.	49,860.	2,020.	100.0	100.0	100.0	3.9	
2. White	48,810.	47,090.	1,720.	94.1	94.4	85.0	3.5	
3. Black	2,640.	2,350.	290.	5.1	4.7	14.3	11.0	
4. Other Races	440.	420.	10.	0.8	0.8	0.7	3.2	
5. Spanish American	320.	320.	0.	0.6	0.6	0.0	0.0	
6. Minority Group*	3,400.	3,090.	300.	6.5	6.2	15.0	8.9	
<u>Female</u>								
7. Total	22,460.	21,590.	870.	100.0	100.0	100.0	3.9	
8. Percent of both sexes	43.3	43.3	43.0	xxxx	xxxx	xxxx	xxxx	
9. White	20,920.	20,230.	690.	93.1	93.7	79.5	3.3	
10. Black	1,350.	1,170.	180.	6.0	5.4	20.3	13.1	
11. Other Races	190.	190.	0.	0.9	0.9	0.0	0.0	
12. Spanish American	180.	180.	0.	0.8	0.8	0.0	0.0	
13. Minority Group*	1,720.	1,540.	180.	7.6	7.1	20.3	10.3	

Notes: \*Sum of Spanish American and all races except white. Some duplication possible since Spanish American may include nonwhite races in addition to white.

Sum of individual items may not equal totals because of rounding.

Percentages computed from unrounded figures.

RESOURCE: Employment and Earnings

FORMAT OR DELIVERY MEDIUM: Printed series with data presented in tables.

GEORGRAPHIC COVERAGE: Nation, State, and SMSAs (For Missouri, information is provided for Kansas City, St. Louis, St. Joseph, and Springfield. Information for Kansas City and St. Louis includes the interstate portions of the SMSAs in the adjacent states.)

RELEASE SCHEDULE: Published Monthly

PRODUCING AGENCY: Bureau of Labor Statistics

AVAILABLITY: Available on a subscription basis, or single copy available by the Superintendent of Documents, U.S. Government Printing Office, Washington, DC 20402.

DATA ITEM: Nonagricultural Employment; hours and earnings, labor turnover rates, labor force and unemployment estimates.

DESCRIPTION: Employment and Earnings is published monthly by the Bureau of Labor Statistics; the data are collected by the Bureau of the Census and the State Employment Security agencies. Each issue contains information for Missouri and selected SMSAs on:

- Nonagricultural Employment: Listed by industry division according to Standard Industrial Classification categories (Mining; construction; manufacturing; transportation and public utilities; wholesale and retail trade; finance, insurance, and real estate; services; and government). Data are provided for the two months prior to the month of publication and for the same period of the previous year.
- Hours and Earnings: Provides average weekly earnings, average weekly hours, and average hourly

earnings for production workers on manufacturing payrolls.

- Labor Turnover Rates: Data are a month older than that of other tables and are provided only for the state, Kansas City and St. Louis SMSAs. Accessions are broken out into new hires and recalls; separations into quits and layoffs.
- Labor Force and Unemployment: Provides number of unemployed and percent of the labor force for the previous month and year.

A special issue comes out in May of each year with annual averages for states and areas. This report indicates average weekly earnings, average weekly hours, and average hourly earnings for production workers on manufacturing payrolls for the previous three years.

Statistics for these reports are compiled from a variety of sources. The information is derived primarily from the Current Population Survey and the Current Employment Statistics program, but is supplemented with records from employers reporting under unemployment insurance taxation laws, the Social Security Administration, and other government and private industry agencies.<sup>1</sup> The limitations of the data presented in Employment and Earnings are that of its sources as well as errors resulting from the different data series being adjusted to each other.

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<sup>1</sup>Detailed information on the programs and data sources that are used to develop Employment and Earnings can be found in the appendix of each issue.

**ESTABLISHMENT DATA**  
**STATE AND AREA HOURS AND EARNINGS**

C-13. Gross hours and earnings of production workers on manufacturing payrolls, by State and selected areas—Continued

State and area	Average weekly earnings			Average weekly hours			Average hourly earnings		
	FEB. 1977	JAN. 1978	FEB. 1978P	FEB. 1977	JAN. 1978	FEB. 1978P	FEB. 1977	JAN. 1978	FEB. 1978P
MISSOURI .....	\$217.65	\$233.22	\$235.81	39.5	39.0	39.5	\$5.51	\$5.98	\$5.97
Kansas City .....	243.60	268.27	255.36	40.0	40.1	38.4	6.09	6.69	6.65
St. Joseph .....	203.60	212.74	208.48	40.0	38.4	37.7	5.09	5.54	5.53
St. Louis .....	254.47	269.68	277.44	40.2	39.6	40.8	6.33	6.81	6.80
Springfield .....	178.60	191.38	198.29	37.6	38.2	39.5	4.75	5.01	5.02
MONTANA .....	247.25	322.77	323.95	40.6	43.5	43.6	6.09	7.42	7.43
NEBRASKA .....	214.24	231.01	221.76	40.7	40.6	38.5	5.26	5.69	5.76
Lincoln .....	201.68	222.51	213.81	38.4	38.9	36.8	5.25	5.72	5.81
Omaha .....	235.86	252.74	248.86	41.4	41.5	40.4	5.70	6.09	6.16
NEVADA .....	224.76	248.32	252.41	39.5	38.8	39.5	5.69	6.40	6.39
Las Vegas .....	292.83	308.03	(*)	42.5	39.9	(*)	6.89	7.72	(*)
NEW HAMPSHIRE .....	177.11	189.37	186.28	39.8	39.7	38.8	4.45	4.77	4.80
Manchester .....	158.34	166.37	168.25	39.0	38.6	38.5	4.06	4.31	4.37
Nashua .....	205.84	213.96	213.84	41.5	40.6	39.6	4.96	5.27	5.40
NEW JERSEY <sup>1</sup> .....	230.83	245.83	229.36	41.0	40.7	37.6	5.63	6.04	6.10
Atlantic City <sup>1</sup> .....	164.09	191.89	189.74	34.4	37.7	35.6	4.77	5.09	5.33
Camden <sup>1,2</sup> .....	223.56	243.20	228.51	40.5	40.0	37.4	5.52	6.08	6.11
Hackensack <sup>1,4</sup> .....	215.46	231.57	214.83	42.0	41.5	38.5	5.13	5.58	5.58
Jersey City <sup>1,4</sup> .....	225.28	242.14	229.74	40.3	39.5	37.6	5.59	6.13	6.11
New Brunswick—Perth Amboy—Sayreville <sup>1,4</sup> .....	251.58	266.09	236.16	42.0	41.0	36.5	5.99	6.49	6.47
Newark <sup>1,4</sup> .....	239.78	246.43	231.98	41.7	40.8	37.7	5.75	6.04	6.14
Paterson—Clifton—Passaic <sup>1,4</sup> .....	218.69	231.24	223.23	40.8	39.8	37.9	5.36	5.81	5.89
Trenton <sup>1</sup> .....	237.63	250.57	224.99	40.9	39.9	35.1	5.81	6.28	6.41
NEW MEXICO .....	165.50	182.62	186.19	38.4	39.7	39.7	4.31	4.60	4.69
Albuquerque .....	171.08	190.24	192.64	37.6	41.0	40.9	4.55	4.64	4.71
NEW YORK .....	220.18	231.27	230.83	39.6	39.0	38.6	5.56	5.93	5.98
Albany—Schenectady—Troy .....	246.45	244.53	255.67	41.7	39.0	40.2	5.91	6.27	6.36
Binghamton .....	195.60	206.04	209.20	40.0	39.7	40.0	4.89	5.19	5.23
Buffalo .....	297.91	303.16	303.35	41.9	40.1	40.5	7.11	7.56	7.49
Elmira .....	217.62	228.67	232.46	40.6	39.7	39.4	5.36	5.76	5.90
Monroe County <sup>5</sup> .....	286.86	303.73	303.48	42.0	41.1	40.9	6.83	7.39	7.42
Nassau—Suffolk <sup>5</sup> .....	212.00	221.48	216.58	40.0	39.2	37.6	5.30	5.65	5.76
New York—Northeastern New Jersey <sup>1</sup> .....	211.86	223.65	(*)	39.6	39.1	(*)	5.35	5.72	(*)
New York and Nassau—Suffolk <sup>4</sup> .....	195.83	204.17	197.64	38.1	37.6	36.0	5.14	5.43	5.49
New York SMSA <sup>6</sup> .....	194.67	200.14	193.49	37.8	37.2	35.7	5.15	5.38	5.42
New York City <sup>7</sup> .....	192.00	197.78	191.16	37.5	36.9	35.4	5.12	5.36	5.40
Poughkeepsie .....	222.98	247.08	244.53	41.6	43.5	41.8	5.36	5.68	5.85
Rochester .....	271.88	284.31	286.94	41.7	40.5	40.7	6.52	7.02	7.05
Rockland County <sup>7</sup> .....	218.17	232.26	227.43	42.2	42.0	39.9	5.17	5.53	5.70
Syracuse .....	242.95	256.40	264.50	40.9	40.0	41.2	5.94	6.41	6.42
Utica—Rome .....	204.00	223.20	220.80	40.0	40.0	40.0	5.10	5.58	5.52
Westchester County <sup>7</sup> .....	212.12	222.55	211.30	39.5	39.6	37.8	5.37	5.62	5.59
NORTH CAROLINA .....	155.23	165.79	172.33	39.1	38.2	39.8	3.97	4.34	4.33
Asheville .....	152.10	154.64	173.01	39.2	36.3	40.9	3.88	4.26	4.23
Charlotte—Gastonia .....	161.99	172.80	174.07	40.6	40.0	40.2	3.99	4.32	4.33
Greensboro—Winston-Salem—High Point .....	167.78	177.46	183.92	39.2	38.0	39.3	4.28	4.67	4.68
Raleigh—Durham .....	171.90	189.54	191.09	38.2	39.0	39.4	4.50	4.86	4.85
NORTH DAKOTA .....	192.77	209.38	210.82	38.4	38.0	38.4	5.02	5.51	5.49
Fargo—Moorhead .....	202.90	220.97	218.52	38.5	37.2	37.1	5.27	5.94	5.89
OHIO .....	268.27	280.50	295.40	41.4	39.9	42.2	6.48	7.03	7.00
Akron .....	276.45	277.89	289.95	42.4	40.1	41.9	6.52	6.93	6.92
Canton .....	254.41	294.33	291.13	39.2	40.1	40.1	6.49	7.34	7.26
Cincinnati .....	243.81	260.80	276.64	40.5	40.0	42.3	6.02	6.52	6.54
Cleveland .....	276.22	285.91	304.88	42.3	39.6	42.7	6.53	7.22	7.14
Columbus .....	243.98	240.28	263.68	40.8	38.2	41.2	5.98	6.29	6.40
Dayton .....	291.89	288.64	304.59	43.5	41.0	42.9	6.71	7.04	7.10
Toledo .....	282.91	300.76	311.32	42.1	41.2	43.0	6.72	7.30	7.24
Youngstown—Warren .....	291.51	314.11	317.10	39.5	38.4	39.1	7.38	8.18	8.11

<sup>1</sup> See footnotes at end of table.

**ESTABLISHMENT DATA  
STATE AND AREA LABOR TURNOVER**

60

**D-4. Labor turnover rates in manufacturing for selected States and areas—Continued**

[ Per 100 employees ]

State and area	Accession rates						Separation rates					
	Total		New hires		Recalls		Total		Quits		Layoffs	
	Dec. 1977	Jan. 1978 <sup>p</sup>	Dec. 1977	Jan. 1978 <sup>p</sup>	Dec. 1977	Jan. 1978	Dec. 1977	Jan. 1978 <sup>p</sup>	Dec. 1977	Jan. 1978 <sup>p</sup>	Dec. 1977	Jan. 1978 <sup>p</sup>
MINNESOTA <sup>1</sup> .....	2.3	3.8	1.7	2.6	0.4	1.0	3.3	3.2	1.1	1.4	1.6	1.1
Minneapolis-St. Paul <sup>1</sup> .....	2.0	3.3	1.5	2.4	.3	.8	2.3	2.7	1.0	1.2	.9	.9
MISSISSIPPI:												
Jackson <sup>1</sup> .....	2.8	3.1	2.5	2.2	.2	.6	3.1	4.0	1.7	1.8	1.0	1.6
MISSOURI <sup>1</sup> .....	2.3	3.3	1.5	2.2	.6	.8	3.0	3.3	1.1	1.5	1.2	1.2
Kansas City <sup>1</sup> .....	1.8	3.3	1.4	2.7	.3	.4	2.3	3.4	1.0	1.3	.7	1.3
St. Louis <sup>1</sup> .....	1.5	2.3	.9	1.5	.4	.6	3.3	2.6	.6	.9	2.0	1.0
MONTANA .....	2.1	2.4	1.7	1.3	(*)	(*)	1.9	3.5	1.0	1.4	.5	1.2
NEBRASKA <sup>1</sup> .....	3.7	4.1	3.3	3.1	.3	.9	3.5	3.7	1.9	2.2	1.0	.7
NEVADA .....	6.3	8.8	4.5	6.8	.8	1.1	6.0	7.7	3.5	3.9	.3	1.2
NEW HAMPSHIRE <sup>1</sup> .....	2.6	4.4	2.2	3.5	.2	.3	3.1	3.8	1.7	2.1	.6	.5
NEW JERSEY:												
Camden <sup>9</sup> .....	1.8	3.3	.8	1.8	.7	.9	2.6	2.7	.5	.8	1.4	.8
Hackensack .....	2.2	3.8	1.6	2.3	.6	1.4	3.1	3.7	1.0	1.3	1.3	1.5
Jersey City .....	2.5	3.4	1.8	1.9	.6	1.4	7.1	4.1	.8	.9	5.2	2.3
Newark .....	2.0	2.8	1.4	1.8	.5	.5	2.3	3.1	.7	1.0	.9	1.3
New Brunswick-Perth Amboy-Sayreville .....	2.2	3.9	1.7	2.2	.4	1.1	3.8	2.8	1.0	1.1	1.9	.5
Paterson-Clifton-Passaic .....	1.7	3.9	1.4	2.5	.2	1.1	4.6	4.5	1.1	1.2	2.8	2.4
Trenton .....	2.4	3.6	1.0	1.3	1.2	1.6	4.6	2.8	.8	.7	2.9	1.3
NEW YORK <sup>1</sup> .....	2.2	3.5	1.3	1.9	.7	1.3	4.0	3.9	.8	1.0	2.5	2.0
Albany-Schenectady-Troy <sup>1</sup> .....	1.4	2.6	.7	1.2	.4	.6	2.3	3.0	.6	.8	1.0	1.0
Binghamton <sup>1</sup> .....	1.9	2.0	1.4	1.5	.1	.4	1.8	2.3	.7	1.1	.6	.4
Buffalo <sup>1</sup> .....	1.6	2.4	.6	.9	.8	1.1	2.6	2.8	.4	.5	1.3	1.4
Elmira <sup>1</sup> .....	1.7	2.3	1.2	1.2	.3	.5	1.8	3.1	.4	.7	.9	1.3
Monroe County <sup>1</sup> .....	1.0	1.1	.7	.8	.2	.1	1.3	1.5	.4	.7	.4	.3
Nassau-Suffolk <sup>1</sup> .....	3.1	4.5	2.6	3.6	.4	.7	5.6	5.2	1.8	2.0	2.6	2.2
New York and Nassau-Suffolk <sup>1</sup> .....	2.9	4.7	1.7	2.6	1.2	1.9	5.3	5.5	1.1	1.3	3.5	3.4
New York SMSA <sup>1</sup> .....	2.9	4.7	1.4	2.4	1.4	2.1	5.2	5.6	.9	1.1	3.7	3.7
New York City <sup>1</sup> .....	3.1	5.0	1.5	2.5	1.5	2.4	5.7	6.2	.9	1.2	4.2	4.2
Rochester <sup>1</sup> .....	1.3	1.5	.8	1.0	.3	.3	2.3	2.2	.5	.7	1.3	.9
Syracuse <sup>1</sup> .....	1.2	1.9	.8	1.2	.3	.5	2.3	2.2	.5	.7	1.3	.8
Utica-Rome <sup>1</sup> .....	1.8	3.1	1.1	1.9	.6	1.0	1.8	2.3	.6	.8	.7	1.0
Westchester County <sup>1</sup> .....	1.6	2.6	1.2	1.7	.2	.7	2.1	1.8	.7	.7	.9	.5
NORTH CAROLINA <sup>1</sup> .....	2.1	4.2	1.7	3.5	.2	.3	3.0	4.1	1.7	2.6	.7	.7
Charlotte-Gastonia <sup>1</sup> .....	2.6	5.1	2.3	4.2	.1	.5	3.7	4.9	2.1	3.3	1.0	.5
Greensboro-Winston-Salem-High Point <sup>1</sup> .....	2.2	4.0	1.8	3.3	.1	.2	2.7	3.7	1.6	2.3	.6	.6
NORTH DAKOTA <sup>1</sup> .....	3.3	4.2	2.4	2.7	.5	1.2	5.9	4.1	1.8	1.7	3.3	1.5
Fargo-Moorhead <sup>1</sup> .....	4.0	3.3	2.7	3.2	.2	(*)	8.8	8.4	1.4	1.5	6.4	5.8
OHIO <sup>1</sup> .....	1.5	2.5	.8	1.3	(*)	(*)	2.0	2.8	.6	.8	.8	1.3
Akron <sup>1</sup> .....	1.0	1.7	.6	.9	(*)	(*)	1.6	1.4	.5	.6	.7	.3
Canton <sup>1</sup> .....	1.8	2.6	.7	1.0	(*)	(*)	2.2	3.3	.5	.7	.7	1.5
Cincinnati <sup>1</sup> .....	1.6	2.1	1.0	1.6	(*)	(*)	1.7	2.1	.7	.8	.6	.5
Cleveland <sup>1</sup> .....	1.5	2.2	1.0	1.4	(*)	(*)	1.8	2.6	.7	.8	.5	.9
Columbus <sup>1</sup> .....	1.5	2.3	1.0	1.2	(*)	(*)	1.8	3.0	.6	.8	.5	1.5
Dayton <sup>1</sup> .....	1.0	1.6	.7	1.2	(*)	(*)	1.5	2.1	.5	.6	.4	.8
Toledo <sup>1</sup> .....	1.5	1.9	.6	1.3	(*)	(*)	1.6	2.5	.4	.7	.6	1.1
Youngstown-Warren <sup>1</sup> .....	1.3	2.6	.2	.5	(*)	(*)	2.4	4.7	.2	.3	1.5	3.3
OKLAHOMA <sup>1</sup> .....	3.7	5.5	3.3	4.9	.3	.5	3.9	4.8	2.7	3.3	.4	.5
Oklahoma City <sup>1</sup> .....	3.6	5.5	3.0	4.9	.5	.5	3.7	4.9	2.5	3.6	.5	.4
Tulsa <sup>1</sup> .....	3.9	5.1	3.5	4.8	.3	.3	3.9	5.1	2.6	3.0	.4	.8
OREGON <sup>1</sup> <sup>2</sup> .....	3.3	4.6	2.6	3.6	.6	.7	3.7	3.9	1.6	1.9	1.4	1.1
Portland <sup>1</sup> <sup>2</sup> .....	3.5	4.9	2.8	3.9	.6	.8	3.3	3.9	1.5	2.0	1.1	1.1
PENNSYLVANIA <sup>1</sup> .....	2.1	3.5	1.0	1.5	.9	1.7	3.4	3.2	.6	.8	2.2	1.6
Allentown-Bethlehem-Easton <sup>1</sup> .....	1.3	3.4	.6	1.0	.6	2.0	3.2	2.9	.6	.8	2.2	1.3
Altoona <sup>1</sup> .....	2.6	3.4	1.0	.7	1.6	2.6	3.0	5.8	1.0	.8	1.7	4.4
Erie <sup>1</sup> .....	2.0	2.2	1.1	1.4	.7	.5	2.0	2.7	.5	.8	.9	1.0
Harrisburg <sup>1</sup> .....	1.9	2.3	1.1	1.4	.7	.8	3.4	2.0	1.0	.9	1.8	.5
Johnstown <sup>1</sup> .....	3.5	3.5	1.1	.6	2.3	2.8	4.2	7.5	.7	1.0	3.3	4.8
Lancaster <sup>1</sup> .....	1.8	4.1	1.5	3.0	.2	1.1	5.2	2.9	1.0	1.4	3.7	.7

See footnotes at end of table.

RESOURCE: Missouri Health Manpower 1978

FORMAT OR DELIVERY MEDIUM: Printed booklet

GEOGRAPHIC COVERAGE: Missouri and the 20 Regional Planning Commission Areas

RELEASE SCHEDULE: Produced annually in the early summer of the year following the reported year

PRODUCING AGENCY: Bureau of Health Resources Statistics, Missouri Center for Health Statistics

AVAILABILITY: Available upon request, contact Mary Neutzler, Research Analyst at the Bureau of Health Resources Statistics, Missouri Center for Health Statistics, P.O. Box 570, Jefferson City, MO 65101 (314) 751-2713.

DATA ITEM: Number of licensed health care professionals by activity status, age, sex, and place of education.

DESCRIPTION: Missouri Health Manpower 1978 presents information on 13 licensed health professions in Missouri: chiropractors, dental hygienists, dentists, doctors of medicine and osteopathy, registered nurses, licensed practical nurses, nursing home administrators, optometrists, pharmacists, physical therapists, podiatrists, and veterinarians. A brief overview is provided for each profession along with data concerning activity status, age, sex, practice characteristics such as primary specialty and setting of employment, and place of professional education.

The data covers those persons, licensed by Missouri, who returned the questionnaire. Physicians are surveyed annually, and the other professions are surveyed bi-annually. The data for nurses in the 1978 report is from a 1977 survey. One follow-up is conducted on those individuals not returning the questionnaire and there is limited

verification on the items reported on the surveys.

This report is not an exhaustive set of health manpower data. Response to the survey is voluntary and the number of licensed professionals is not necessarily an accurate measure of active professionals.

## SECTION FIVE

ENROLLMENT AND COMPLETION

DATA SOURCES

RESOURCE: Missouri Dept. of Higher Education Information System

FORMAT OR DELIVERY MEDIUM: Printed reports

GEOGRAPHIC COVERAGE: Missouri, data available by institution

RELEASE SCHEDULE: Data available in February on enrollments for each academic school year.

PRODUCING AGENCY: Missouri Dept. of Higher Education

AVAILABILITY: Available upon request from the Director of Research and Planning, Missouri Dept. of Higher Education, 600 Monroe, Jefferson City, MO 65101 (314) 751-2713.

DATA ITEM: List of institutions of higher education; programs offered and degree levels available; enrollment by program and degrees conferred.

DESCRIPTION: The Missouri Dept. of Higher Education, Division of Research and Planning, collects, analyzes, maintains, and disseminates state, federal and ad hoc surveys. Information collected on a routine basis includes information on academic programs, students, faculty, facilities, and finance. In addition, the Division conducts special or ad hoc studies for the Coordinating Board for Higher Education. The four basic components of the MDHE Information System are: Higher Education General Information Surveys, the certificate and degree program inventory and analytic reporting system. Some of the data in the Information System is automated for purposes of reporting and analysis, the remaining data is maintained in a manual system.

Higher Education General Information Surveys: These surveys are conducted by the National Center for Education Statistics, and are coordinated in Missouri by the MDHE

Division of Research and Planning. Surveys administered on an annual basis include Degrees Conferred, Fall Enrollment, Institutional Characteristics, Faculty Salaries, and Finances. In addition, each year NCES conducts additional surveys on a non-annual basis.

MDHE Surveys: The MDHE surveys are also administered by the Division of Research and Planning. Through the surveys, information is collected routinely, usually annually, on academic calendars, enrollment, nontraditional programs, age of students, admissions, entering student abilities, retention, enrollment by program, financial aid, and various financial indicators.

Degree and Certificate Program Inventory: In addition to routine surveys, the Division maintains an inventory of degree and certificate programs in Missouri institutions of higher education. The most recent inventory, which includes a listing of programs offered by each institution reporting to the Department, was published in February 1979. In 1980 a supplement will be published which will list programs that are new, changed, or deleted.

MDHE Reporting System: In addition to the program inventory, the Division analyzes and disseminates Missouri higher education information on a routine basis. Items published include: a directory of institutions; a research and planning series which includes information on fall enrollment; and ad hoc studies with information on topics such as student loan programs and computing practices in schools.

RESOURCE: Vocational Education Data System

FORMAT OR DELIVERY MEDIUM: Printed computer runs

GEOGRAPHIC COVERAGE: by individual school, school district, and state

RELEASE SCHEDULE: Annually with data for previous fiscal year ending July 1, available in September

PRODUCING AGENCY: State Dept. of Education

AVAILABILITY: The information is not generally available. Interested persons should contact Delbert Lund, Director, Research Coordinating Unit, State Dept. of Education, Jefferson State Building, 7th Floor, Jefferson City, MO 65101, Phone - (314) 751-2661.

DATA ITEM: Enrollment in vocational education programs by sex, race, disadvantaged and handicapped status, and estimated completion; completions data by sex, race, handicap status, instructional program and level completed, field of employment and average hourly wage.

DESCRIPTION: The Vocational Education Data System was developed by the National Center for Education Statistics (NCES), as mandated by federal legislation, to provide for uniform reporting from the states. The program and the data sources that comprise it are still in the developmental process. The program covers vocational education in secondary, post-secondary, and adult vocational programs. Only federally funded programs are reported.

VEDS provides unduplicated enrollment and completion data by 6 digit United States Office of Education Instructional Program Code (USOE). Information on enrollment is broken down into sex, race, disadvantaged, handicapped, and estimated completion. Enrollments are listed by school, district, program type, and teacher. The program categories

provided are broad and limited in detail. The most current enrollment data available is for 1977-78. The past year's data (for fiscal year ending July 1) are normally available in September.

Completions data is available for the past year by program area but not USOE code. Missouri's Vocational Education Data System will be changing it's reporting method to meet the national guidelines established by the National Center for Education Statistics. Follow-up data on students completing 50% or more of their program will be taken from a 20% sample selected by Missouri's VEDS headquarters.<sup>1</sup> The selected student names are sent back to the individual schools for information to be collected on: student characteristics (race, sex, handicap status); instructional program by USOE code; level of program completed; and average hourly salary and field of employment by 2 digit Standard Occupational Classification code.

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<sup>1</sup>The change in reporting methods may cause problems in making comparisons between years. For example, follow-up data was previously collected on the universe of program completers instead of on a sample basis.

## SECTION SIX

OCCUPATIONAL CLASSIFICATION SYSTEMS

ACRONYMS

GLOSSARY

CONTACT OFFICES

United States Office of Education (USOE)  
Instructional Program Codes (Handbook VI)

The USOE code was designed for use by local and state education agencies in identifying, classifying, and describing information about subject matter and curriculum. It is currently being revised to encompass all education programs and will replace the HEGIS code.

This taxonomy presently encompasses 20 subject-matter areas, one area for co-curricular activities, and one area for general elementary and secondary education. Seven of the subject-matter areas were designated for vocational-technical education. Although the other subject areas are identified by 10 digit codes, the vocational-technical education areas have generally been limited to six, and in a few cases eight digits to allow for greater detail.

The USOE code ranges from broad subject-matter areas to specific programs. The first two digits of the code indicate broad subject-matter area, such as "office occupations" and each two digit group following represents greater specificity. Individual training programs may be included in more than one broad subject-matter area, making tabulation of the data more difficult. A description is provided for each instructional program but these are composites of subject matter rather than well-defined courses.

Dictionary of Occupational Titles (DOT)

The Dictionary of Occupational Titles was developed for the Employment Service system to provide standardized

occupational information for job placement and counseling, and occupational and career guidance. The fourth edition, including almost 20,000 occupations, organizes jobs into "occupations" on the basis of similarities between jobs and their relatedness to the structure and content of the occupations.

Each occupation is given a nine digit code which reflects the type and level of work performed. The first three digits indicate grouping occupations on the basis of some combination of work field, purpose, material, product, service, subject matter, generic terms, and/or industry. Each of the first three digits allows the occupations to be aggregated at successively finer levels of detail; from nine broad categories into 82 two digit divisions which in turn are divided into 559 separate three-digit groups.

The fourth, fifth, and sixth digits indicate relationships between the specific occupation and data, people, and things. The relationships are expressed as a hierarchy, from simple to complex. Each successive level includes the simpler functions and excludes the complex.

The final three digits indicate the alphabetical order of occupations within the six-digit code groups and act as a unique identifier for each occupation.

Higher Education General Information Survey (HEGIS)

The HEGIS classification system attempts to represent how the majority of higher education institutions organize

and record their data, as well as representing categories for which data is needed. HEGIS data is compiled from surveys on earned degrees and formal awards; enrollment by division, major, and field of training for faculty; as well as other information relevant to higher education institutions.

HEGIS is divided into two sections, the first of which reflects training for conventional academic programs. The second division refers to technological and occupational training related to associate degrees and other awards below the baccalaureate level. The two sections are divided into disciplines which are further divided into discipline specialties, including a special category for "general" disciplines. Each discipline has a classification code consisting of four digits; the first two refer to the discipline division, and the latter two refer to the specialty area.

Some problems have occurred with this classification system as coding is subject to each administrator's interpretation. In some cases, programs or individuals do not fit precisely into one code and require the use of several codes for identification.

Occupational Employment Statistics (OES)  
Survey Classification System

The OES classification system uses a combination of titles and descriptions of occupations from the Dictionary of Occupational Titles and Census occupational categories

and titles. The structure has been designed for flexibility in adding and deleting occupations as industries' structures and change.

The survey code consists of five digit codes for each occupation, with a variety of major categories to allow for aggregation and summarization of data within each category. Four of the five digits are always numerical, the third digit is frequently a letter to allow for a larger number of occupations to be included without exceeding the five digit standard.

The matrix code consists of eight digits, five of which correspond to the survey code. The remaining three provide for subtotals, summaries, and aggregation. The subtotals correspond to the 1970 Census major occupational groups.

#### Census Occupational Classification System

The 1970 Census uses 441 occupational categories, each of which is assigned a three digit code. These categories are arranged in twelve major occupation groups. Due to the limited number of these occupation groups, each encompasses a wide range of skill levels. No definitions are provided for the occupational titles and there is little comparability between the Census and other classification systems. The 1980 Census will use the Standard Occupational Classification System, which should alleviate some of these problems.

### Standard Occupational Classification

Developed in 1977 to provide a standard for occupational classification and promote comparability in occupational statistics, the Standard Occupational Classification (SOC) Manual serves as a mechanism for cross-referencing and aggregating occupational data collected by different programs. This classification system covers all occupations in which work is performed for pay or profit, including unpaid family members working for a family-operated enterprise.

The manual is based on a four tier classification system: Division, major group, minor group, and unit group. Each level consists of smaller and more closely related groupings of homogeneous occupations, with residual categories established for occupations that do not warrant separate identification or do not fit into any specific group. A list of Dictionary of Occupational Titles titles and codes relevant to the occupations included, are provided with each grouping. Selected Census titles and codes are also included.

An occupation is classified on the basis of work performed with allowances made for education, training, and skill requirements, and place of work where they significantly affect the nature of the work performed. Occupations consisting of more than one district activity are classified on the basis of the activity performed the major portion of the worker's time.

### Standard Industrial Classification (SIC)

The Standard Industrial Classification was designed for classifying establishments by the primary activity they are engaged in, which is determined by the principle product or group of products produced or distributed, or by services rendered. It is intended to cover the entire range of economic activities from agriculture to public administration. The SIC was developed to provide uniformity and comparability between data collected by various governmental agencies and private organizations.

The structure of the classification allows for data to be presented from two to four digit code detail. Two digit codes represent the broadest categories of classification, with the classification becoming successively more detailed with the three and four digit code levels. Individual agencies can create additional subdivisions beyond the four digit level for their own purposes, while retaining comparability with other series as the data can be aggregated back to the four digit level or to even broader categories.

The SIC classifies establishments rather than legal entities or enterprises. A Standard Enterprise Classification related to the SIC has been developed for use in classifying enterprises.

## ACRONYMS

APR	Annual Planning Report
AVS	Area Vocational School
BAT	Bureau of Apprenticeship and Training
BLS	Bureau of Labor Statistics
CBP	County Business Patterns
CETA	Comprehensive Employment and Training Act
CPS	Current Population Survey
DOL	Department of Labor
DOT	Dictionary of Occupational Titles
ES	Employment Security
ESARS	Employment Security Automated Reporting System
ETA	Employment and Training Administration
HEGIS	Higher Education General Information Survey
JBOS	Job Bank Openings Summary
Job-Flo	Job Bank Frequently Listed Openings
LAS	Labor Area Summary
LAUS	Local Area Unemployment Statistics
LMI	Labor Market Information
MDES	Missouri Division of Employment Security
MDHE	Missouri Department of Higher Education
MOICC	Missouri Occupational Information Coordinating Committee
NCES	National Center for Education Statistics
NOICC	National Occupational Information Coordinating Committee
OES	Occupational Employment Statistics

OIS	Occupational Information System
OMB	Office of Management and Budget
OMP	Office of Manpower Planning
OOH	Occupational Outlook Handbook
PAIS	Public Affairs Information Service
PEP	Public Employment Program
PIC	Private Industry Council
PSE	Public Service Employment
RMPC	Regional Manpower Planning Council
SESA	State Employment Security Agency
SETC	State Education and Training Council
SIC	Standard Industrial Classification Code
SMSA	Standard Metropolitan Statistical Area
SNAPS	State and National Apprenticeship System
SOC	Standard Occupational Classification Code
SOICC	State Occupational Information Coordinating Committee
UI	Unemployment Insurance
USOE	United States Office of Education
VEDS	Vocational Education Data System

## GLOSSARY

accessions: the total number of permanent and temporary additions to the employment roll, including newly hired personnel and rehired (transferred or recalled) personnel.

benchmark statistics: comprehensive data compiled at relatively infrequent intervals and used as a basis for developing and adjusting interim estimates made from sample information.

Bureau of the Census: a Department of Commerce operation with federal office in Washington and 12 regional offices throughout the country, which is charged with the decennial task of obtaining an account of numbers and characteristics of the population. The Bureau will be conducting a census every five years starting in 1985 as a result of recent legislation. The Bureau conducts a variety of other surveys, some on-going and some as mandated by Congress when the need arises.

Bureau of Labor Statistics (BLS): one of the major subdivisions of the U. S. Department of Labor with offices at the national and regional levels. BLS is the principal data-gathering agency of the federal government in the field of labor economics. BLS collects data through surveys conducted by its own staff, or by other cooperating federal and state agencies, on employment, unemployment, the labor force, productivity, prices, family expenditures, wages, industrial relations and occupational safety and health. BLS also provides technical assistance to the states in the development and standardization of methodology for data collection and analysis.

civilian labor force: the total of all civilians 16 years old and over who are classified as either employed or unemployed and who are not in the Armed Forces.

Comprehensive Employment and Training Act of 1973 (CETA): the purpose of this Act is to provide job training and employment opportunities for economically disadvantaged, unemployed, and underemployed persons and to assure that training and other services lead to maximum employment opportunities by establishing a flexible and decentralized system of Federal, State, and local programs. This Act provides for grants to selected prime sponsors and integration of the categorical programs.

consortium: an entity formed by an agreement of local units of government to plan and operate a comprehensive manpower program as a prime sponsor under CETA.

covered employment: those jobs covered by the unemployment compensation program. Generally, those not covered include agricultural workers, domestic and service workers, employees of state and local governments, and self-employed workers. Those persons covered but ineligible for unemployment compensation are usually persons who have exhausted their benefit rights through long periods of unemployment and new workers who have yet to earn benefit rights.

disadvantaged: a reference to persons competitively disadvantaged in the job market by age, racial, education, physical or mental impediments. For administrative and planning purposes the characteristics of the disadvantaged are specified by income levels and other labor market indicators.

disclosure rule: the disclosure rule states that it is improper to publish employment data in any case where it would tend to reveal the operations of an individual firm or organization. In such cases, industry employment cannot be presented but size of firm distribution may be.

discouraged workers: unemployed persons who make no active attempt to find a job because they think none is available. These persons are not included in the unemployment count of unemployment rate. Many are women and teenagers, but the number of male adult workers typically increases during prolonged periods of high unemployment.

Department of Labor (DOL): federal agency charged with the responsibility of supervising most manpower programs through its subdivision, the Employment Training Administration.

economically disadvantaged: a person who is a member of a family which: 1) receives cash welfare payments; or 2) has a total annual income in relation to family size that does not exceed the poverty level determined in accordance with criteria established by the Office of Management and Budget.

employed persons: as defined by the CPS, "employed persons" comprise (1) all persons who do any work at all as paid employees in their own profession, business or farm, or who work 15 hours or more per week as unpaid workers on a farm or business operated by a family member; and (2) all persons who are not working but have jobs or businesses from which they are temporarily absent because of illness, bad weather, vacation, labor-management dispute, or personal reasons, whether or not they were paid by their employers for the time off, and whether

or not they were seeking other jobs. Employed persons do not include foreign citizens temporarily in the U.S. or persons whose only activity consists of unpaid work around the house or volunteer work for religious, charitable, and similar organizations.

employment growth or decline: a change in the level of employment over a given time span, either in the past or projected to the future. Employment growth is one source of job openings in industries or occupations, since it is a measure of the creation of new jobs as opposed to filling "old jobs" from which workers separate.

Employment and Training Administration (ETA): one of the major subdivisions of the U.S. Department of Labor, ETA maintains a regional office in each of the federal regions in the nation. Its operations consist of field units and office units providing administrative management services, unemployment insurance services and equal employment opportunity services. ETA funds the operation of state and local Job Service (Employment Security) offices, as well as having responsibilities for technical assistance and research and analysis in employment security offices.

entrants: persons who become part of the labor force, may be new to the labor force, or may be re-entering after a period spent outside the labor force.

entry level: a term usually associated with those jobs or occupations for which employers hire workers either with little or no previous work experience or with relatively minimum training or education. Occupations which require a relatively greater amount of education or training may have specific entry level classifications such as "apprenticeship" or "internship."

establishment: an economic unit, generally a single physical location where business is conducted.

exhaustee: an individual who has made a claim for unemployment compensation and has exhausted all such benefits to which the individual was entitled to. Exhaustee status will continue through the existing regular benefit year, at which time a new claim may be filed creating a new status of eligible or ineligible for unemployment compensation.

experienced labor force: includes the employed and the inexperienced unemployed--that is, unemployed persons who have worked at any time in the past.

family: one person or more than one person living in a

single household who are related to each other by blood, marriage, or adoption. A stepchild or foster child who receives at least 50 percent of his/her support from the step-parent or foster parents shall be counted as a member of the step-parent's or foster-parent's family. A member of the household who is 18 or older, and who receives less than 50 percent of his/her maintenance from the family shall not be considered a member of the family. Such an individual shall be considered a family residing alone or in group quarters.

family head: a person who is a member of a family of two or more persons and is considered to be the head of the family by members of the family.

frictional unemployment: joblessness due to labor-management disputes, resource supply bottlenecks, machinery breakdowns, and social incompatibility on the job, usually affecting workers capable of relocating or securing employment in a short time following job transition.

fringe benefits: nonpecuniary awards or benefits paid by an employer to complement wage or salary compensation.

full-time employed: persons working 35 hours or more per week.

gross wages or salary: the total money earnings received for work performed as an employee. It represents the amount before deductions for income taxes, social security, bond purchases, union dues, etc.

head of household: a person who is responsible for more than 50 percent of the support of one or more members of a household or family, other than the applicant.

household: all persons occupying a housing unit.

industry: describes a type of economic activity engaged in by a firm or group of firms, as used in the compilation of economic statistics.

insured unemployment: a count of persons filing claims for benefits under the unemployment insurance programs operated by the states.

job bank district: the geographic area for which openings are grouped and reported by local Job Service agencies. In most instances, job bank districts are analogous to established labor market areas.

job openings: estimates of the number of positions where an employer seeks to hire a new worker. Job openings

occur because of employment growth, and replacement of workers who die, retire, or leave for other reasons.

job vacancies: vacant jobs which are immediately available for filling, and for which the firm is actively trying to find or recruit workers from outside the firm.

labor demand: may refer to the current situation or to expectations for the future. Current labor demand may be defined as total employment plus the number of job vacancies existing. Projected labor demand refers to the number of job openings expected to occur over a given period of time because of growth in employment and the need to replace workers who die, retire, or leave employment for other reasons.

labor force: all persons enumerated as in the noninstitutional population between 16 and 65 years of age who are either employed or meet the definition of unemployed, including members of the Armed Forces.

labor market area: consists of a central city or cities, and the surrounding territory within normal commuting distance. It typically includes one or more counties which represent an economically integrated geographic unit within which workers may travel to work or change jobs without changing their place of residence. The area takes the name of its central city or cities. The boundaries depend primarily on economic and geographic factors, and not on political jurisdictions. In some parts of the country the boundaries cross state lines. When significant changes in economic and population trends, and commuting patterns occur, area boundaries are subject to change.

labor market information: a term used to describe data on labor force, employment, unemployment, wages, prices, supply and demand, occupational, industrial, economic and demographic data for the planning, operation and evaluation of federal, state and local employment and training programs, and for the analysis of manpower problems for specifically defined areas.

labor supply: may refer to the current situation or to expectations for the future. Current labor supply is defined as the number of persons working or available for work, i.e., the employed plus the unemployed. Projected labor supply refers to the number of persons expected to be available for work in the future.

labor turnover: as applied to the total labor force for an occupation, industry, or area, refers to the amount of movement of workers into and out of employment over a given period of time. Labor turnover includes

accessions (new hires and rehires) and separations (quits, layoffs, firings, etc.).

layoffs: suspensions without pay, lasting or expected to last more than 7 consecutive days, initiated by the employer without prejudice to the worker.

manpower requirements: refers to the level of employment needed in an industry or occupation to meet certain levels of production.

matrix: a format for listing two characteristics of interest related to a single population by describing one attribute in the columns of a table and the other in the rows of the same table. A commonly used matrix in the manpower area is an industry-occupation matrix. Such a matrix describes the industrial affiliations of an area's labor force in the column headings and its occupational attributes in the row descriptions. The observer can study the occupational patterns of a given industrial classification or the relative industrial affiliations of certain occupations.

mean: measure of central tendency derived by dividing the total of a particular statistical universe by the number of units in the universe or "average."

median: measure of central tendency that is the middle number in a series or the arithmetic mean of the two middle values of a set of numbers arranged in order of magnitude. One-half of the items of a set lies above and one-half lies below this middle value.

migrant or seasonal farm worker: a person who during the preceding 12 months worked at least 25 days in farm work and worked less than 150 consecutive days at any one establishment. Includes both migratory and non-migratory farm workers, but does not include supervisors or non-migratory individuals who are full-time students or farm workers who are not "seasonal" as defined in the preceding sentence.

migration: refers to a change in geographic location of residence. Migration may also refer to movement in and out of a labor market area.

new entrants: persons who have never worked at a full-time job lasting at least two weeks.

new hires: temporary or permanent additions to the employment roll of persons who have never before been employed in the establishment.

(NOICC): created by Congress as part of the Education Amendments of 1976, the NOICC represents the U.S. Office of Education, the National Center for Education Statistics, the Employment and Training Administration, and the Bureau of Labor Statistics. Its purpose is to improve coordination and communication between administrators and planners of education and occupational training, to develop and implement an Occupational Information System (OIS) and to provide technical and fiscal assistance to State Occupational Information Coordinating Committees (SOICCs).

occupation: the name or title of a job identifying and specifying the various activities and functions of a worker.

occupational cluster: denotes a group of occupations concerned with the activities or tasks required to produce similar kinds of products or to render similar services; for example, construction trades, clerical jobs, and machine operations jobs.

occupational mobility: the transfer of workers from one occupation to another. A change in occupation may be along a path or advancement or among related occupations or among unrelated occupations.

Occupational Information System (OIS): a formal system for the collection, analysis, and dissemination of occupational information based on uniform definitions and standardized occupational classifications and estimating procedures. The OIS should be designed to meet the common needs of manpower, employment, and training programs. (See definition of NOICC.)

Office of Management and Budget (OMB): the federal agency which, with regard to manpower, determines official administrative, budgetary, and financial standards.

prevailing wage: the wage received by the majority of the workers in an occupation in an area. This is usually presented as a range from a low wage average to a high one.

prime sponsor: governmental unit having responsibility for administering CETA programs in the local areas. Usually the prime sponsors are county and/or city governments.

projections: estimates of future levels of labor force employment, job openings, labor supply, and other information based on specific methodologies and assumptions about future economic conditions and technology.

quits: terminations of employment initiated by employees, failure to report after being hired, and unauthorized absences if for a period of more than 7 consecutive days.

rate of unemployment: the number of unemployed persons, as a percentage of the total number of persons in the civilian labor force.

recalls: permanent or temporary additions to the employment roll of persons specifically recalled to a job in the same establishment of the company following a period of layoff lasting more than 7 consecutive days.

re-entrants: persons who have previously worked at a full-time job lasting at least two weeks but who were out of the labor force prior to beginning to look for work.

relative error: also referred to as sampling error; an indication of the error resulting from a sample being surveyed rather than a complete enumeration.

replacement needs: refers to the numbers of job openings expected because employers need to replace workers who die, retire, or leave their jobs because they migrate to different areas or transfer to different occupations.

salary: payment to a person by the week, month, or year for work rendered.

sample: a group of items selected from a larger group for the purpose of estimating the properties of the total group. The data obtained from a representative sample are usually sufficiently accurate in their reflection of the total group to identify trends, and for other analytical purposes.

seasonal adjustments: are statistical modifications made to compensate for predictable fluctuations which recur more or less regularly every year in a time series such as unemployment rates. These fluctuations can be so strong as to distort the underlying changes in trends. For this reason unemployment rates are reported on a seasonally adjusted basis, compensating for such influences as the summer closing of the schools, temporary hiring for the holiday season, seasonal style changes, and the like. Such adjustments facilitate the evaluation of the more important underlying reasons for month-to-month changes in joblessness.

self-employed workers: include those who work for profits or fees in their own unincorporated business, trade, professional practice, or who operate farms. Persons

employed in their own incorporated businesses are counted as wage and salary workers.

separation: employment termination caused by quit, layoff, or other reason such as death, retirement, permanent disability, or transfer.

shortage occupations: those in which the labor demand exceeds the labor supply. Current shortage occupations are those in which job vacancies cannot be filled within a reasonable time because there are not enough qualified applicants at the prevailing wage rate. The existence of large numbers of openings is not in itself a sign of a shortage. Occupations with large numbers of openings are often those experiencing high turnover, and are often low-paying dead-end jobs which job seekers try to avoid. Projected shortage occupations are those in which the number of job openings is expected to exceed the projected number of entrants.

Standard Metropolitan Statistical Area (SMSA): the Census term for defining urban areas of a county or group of contiguous counties containing at least one city of 50,000 or more inhabitants or "twin cities" with a combining population of at least 50,000, usually including adjacent counties which reflect a metropolitan character and economic and social integration with the central city.

State Employment Security Agency (SESA): the system of Job Service offices and unemployment insurance offices which coordinates the State Job Service agencies and the U.S. Employment Service.

State Occupational Information Coordinating Committee (SOICC): created with the NOICC as part of the Education Amendments of 1976. The three major purposes of SOICC are to: improve communication and coordination among state agencies involved in the production and use of occupational information; developing and implementing a state Occupational Information System (OIS); and giving special consideration to the labor market information needs of youth in career decision-making and seeking employment. ("MOICC" is the Missouri SOICC.)

structural unemployment: also referred to as "hard core" unemployment, it is joblessness due to systematic industry or consumer demand-based shifts in occupational needs usually affecting the lower skilled, less educated, less experienced, chronically unemployed workers.

surplus occupations: those in which labor supply exceeds the labor demand. Current surplus occupations are those in which there are more qualified applicants than employers

wishing to hire at the prevailing wage rate. Projected surplus occupations are those in which the number of entrants is expected to be greater than the number of job openings.

underemployed: is the employment of persons at jobs that call for less than their highest current level of skill (and at wages less than those to which those skills, if fully utilized, would normally entitle them). Underemployment has also been defined as "involuntary part-time employment"--i.e., employment of a person on a part-time basis when full-time work is desired, and as earnings from full-time work which are below the officially determined poverty level.

unemployed persons: all persons who are not working, who are making specific efforts to find a job, and who are available for work (except for temporary illness). Also included are persons who are not working, are available for work, and (1) are waiting to be called back to a job from which they have been laid off or (2) are waiting to report to a new wage or salary job within 30 days.

unemployment compensation: the compensation payable in accordance with the provisions of a state or federal unemployment compensation law, and payments of unemployment assistance in accordance with the provisions of the Disaster Relief Act trade readjustment allowances in accordance with the provisions of the Trade Expansion Act or the Trade Act of 1974, and payments or similar assistance or allowances in accordance with the provisions of any other federal law.

Unemployment Insurance (UI): resources available to eligible unemployed workers through employer-supplied funds to federal or state Employment Services according to the Social Security Act.

unemployment rate: represents the number of unemployed as a percent of the civilian labor force, i.e., the sum of the employed and the unemployed. The seasonally adjusted unemployment rate eliminates the influence of regularly recurring seasonal fluctuations which can be ascribed to weather, crop-growing cycles, holidays, vacations, regular industry model changeover periods, and the like, and, therefore, more clearly shows the underlying basic trend of unemployment.

unpaid family workers: person who worked without pay for 15 hours a week or more on a farm or business operated by a family member.

wages: usually hourly payment for services rendered. Total

wages encompass all compensation paid to workers, including commissions, bonuses, cash value of meals, lodging, and other gratuities, if furnished in connection with the job.

wage and salary workers: persons in the employ of some organization or individual who receive wages, salaries, commissions, tips, or payment in kind. Persons working in their own incorporated business are also counted as wage and salary workers.

## CONTACT OFFICES

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Federal Office Building  
911 Walnut St., 15th. Floor  
Kansas City, MO 64106  
(816) 374-2481

Missouri Center for Health Statistics  
P.O. Box 570  
Jefferson City, MO 65101  
(314) 751-2713

Missouri Department of Higher Education  
600 Monroe  
Jefferson City, MO 65101  
(314) 751-2361

Missouri Division of Employment Security  
(See end for listing of state and local offices.)

Missouri Occupational Information Coordinating Committee  
830D E. High St.  
Jefferson City, MO 65101  
(314) 751-2624

Missouri State Library  
308 E. High St.  
Jefferson City, MO 65101  
(314) 751-4214

### Missouri Resource Libraries:

Kansas City Public Library  
Springfield-Greene County Library  
Mid-Continent Public Library  
University of Missouri-Columbia Library  
St. Louis County Library  
St. Louis Public Library

State Department of Education  
Research and Coordinating Unit  
Jefferson State Building, 7th. Floor  
Jefferson City, MO 65101  
(314) 751-2661

Superintendent of Documents  
U.S. Government Printing Office  
Washington, D.C. 20402

**Employment Security Offices****Central Office:**

Missouri Division of Employment Security  
421 E. Dunklin  
P.O. Box 59  
Jefferson City, MO 65101  
(314) 751-3215

**Local Offices (Area Covered):**

St. Louis SMSA  
(St. Louis City and St. Louis,  
St. Charles, Jefferson, and  
Franklin Counties)

Division of Employment Security  
505 Washington Ave.  
St. Louis, MO 63101  
(314) 231-7348

Kansas City SMSA  
(Jackson, Clay, Platte,  
Cass, and Ray Counties)

Division of Employment Security  
1411 Main St.  
Kansas City, MO 64105  
(816) 471-5700

Springfield SMSA  
(Greene and Christian Counties)

Division of Employment Security  
P.O. Box 1656  
505 E. Walnut St.  
Springfield, MO 65806  
(417) 869-4611

St. Joseph SMSA  
(Buchanan and Andrew Counties)

Division of Employment Security  
301 S. Seventh St.  
St. Joseph, MO 64501  
(816) 364-2961

Columbia SMSA

(Boone County)

Division of Employment Security  
P.O. Box 898  
2102 Whitegate Drive  
Columbia, MO 65201  
(314) 474-8481

Joplin Labor Market Area

(Jasper and Newton Counties)

Division of Employment Security  
P.O. Box 1270  
730 Wall Ave.  
Joplin, MO 64801  
(417) 624-4311

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